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THESIS

MODELING STAKEHOLDER DECISION LOGIC:
A CASE STUDY OF LEBANESE HEZBOLLAH

by

Ronald A. Garrick

June 2010

Thesis Advisor:	Roberto Szechtman
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MODELING STAKEHOLDER DECISION LOGIC: A CASE STUDY OF LEBANESE HEZBOLLAH

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Submitted in partial fulfillment of the
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THESIS DISCLAIMER

The reader is cautioned that the computer programs presented in this research may not have been exercised for all cases of interest. While every effort has been made, within the time available, to ensure that the programs are free of computational and logical errors, they cannot be considered validated. Any application of these programs without additional verification is at the risk of the user.

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LIST OF ACRONYMS AND ABBREVIATIONS

ADF	Arab Deterrence Force
AEOI	Atomic Energy Agency of Iran
AIOC	Anglo-Iranian Oil Company
IAEA	International Atomic Energy Agency
IR	Islamic Republic of Iran
IRGC	Iranian Revolutionary Guard Corps
IRP	Islamic Revolutionary Party
IDF	Israeli Defense Force
IPC	Iraqi Petrol Company
IS	State of Israel
LB	Lebanon
LF	Lebanese Front
LH	Lebanese Hezbollah
MEDO	Middle Eastern Defense Organization
NATO	North Atlantic Treaty Organization
NCRI	National Council of Resistance of Iran
NPT	Nuclear Nonproliferation Treaty
OPEC	Organization of Petroleum Exporting Countries
PA	Palestinian Authority
PFLP	Popular Front for the Liberation of Palestine
PFLP-GC	Popular Front for the Liberation of Palestine-General Command
PLO	Palestinian Liberation Organization
SY	Syria
U.S.	The United States
SAVAK	Persian term for National Intelligence and Security Organization
SCIRI	Supreme Islamic Council of Iraq
UCC	Unified Combatant Command
STANA	Stakeholder ANalysis Application

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EXECUTIVE SUMMARY

This thesis represents the first step toward developing a modeling technique and analytic methodology to explore decision-making logic in complex political systems that evolve over time and that involve multiple stakeholders. A U.S. Unified Combatant Command commissioned this research to add an analytic and quantitative complement to currently employed methods for analyzing these systems.

The backdrop for this research is an analysis of a system of political stakeholders, with particular emphasis on the decision-making logic of Lebanese Hezbollah. The two research questions posed by Unified Combatant Command that prompted this research effort are:

- *How would Lebanese Hezbollah respond to an Israeli strike against Iranian nuclear facilities?*

- *Under what conditions would Lebanese Hezbollah retaliate for the death of Imad Mughniyah?*

As with any system of political stakeholders, there are a wide variety of state and non-state actors that have interests, directly or indirectly, related to Hezbollah, Lebanon, and the Middle East in general. This thesis begins with a thorough historical review of the Middle East to frame and define the system. Of particular importance is concisely defining who the stakeholders are, what they want, and what they can do to get what they want. As a result, the system of actors involved in this system was narrowed to include the following stakeholders: the Islamic Republic of Iran (IR), the United States (U.S.), Syria (SY), Lebanese Hezbollah (LH), and Israel (IS). All other state and non-state actors' stakes in this system are implicitly modeled through one or more of these actors.

One unique challenge of modeling a political system with quantitative methods is mapping qualitative data into a form that is digestible by a quantitative model. Here, techniques of Decision Theory are applied to allow model users to estimate preference ordering of all stakeholder interests, assigning a utility value to various combinations of realized interests. In so doing, stakeholder interests are placed on a quantitative scale where the relative ordering and distance between preferences is measurable, but also provides the

ability to compare decisions and provide results that can be analyzed and interpreted quantitatively and qualitatively. Additionally, a number of probability estimates are required to account for the inherent uncertainty of the system. The historical review presented in this thesis also provides the foundation for understanding and estimating these probabilities.

Having defined and framed the system, this thesis then seeks to develop a full conceptual representation of the system that is simple enough to evaluate, detailed enough to capture key relationships, and transparent to users of the model. To meet these criteria, influence diagrams are employed. A generalized conceptual model using influence diagrams is developed in this thesis to provide a graphical representation of the system under study. From this generalized model, each question is modeled and implemented with adjustments for the nuances of each research question.

The first model developed—the one that explores Hezbollah decision making after an Israeli strike against Iran—seeks to represent the system and then initiate a "shock" event (i.e., the strike). The purpose then is to enable analysis of how Hezbollah's decision making might change once the shock is introduced. The second model—regarding retaliation for Mughniyah's death—considers the system from a different angle. Instead of introducing a catalyzing event, it is framed to allow the user to explore the conditions that could induce a retaliatory attack by Hezbollah.

The thesis sponsor, Unified Combatant Command, sought a methodology that could be applied to these questions, but general enough to apply to future work. With this in mind, the research and work performed in this thesis aimed at developing mechanisms that allowed the user to interact with the model on the front end. To achieve this, a Java application was developed, STANA (STakeholder ANalysis Application) that provides an interface between Genie v2.0 decision analysis software, Java, and Microsoft Excel. This provides the user the ability to manipulate or construct models in an intuitive, easy-to-use interface. Java provides the flexibility to add dynamic and multi-agent capabilities that are not native to Genie. Finally, Microsoft Excel is used to conveniently enter model parameters and read out data. Combined, STANA provides a flexible application that enables the user to investigate a broad range of "what if" scenarios with one or two decision makers in a system with temporal dependencies.

The real value provided by analysis is often found in the insights gained by exploring relationships between variables within a model. With that in mind, an additional capability

was sought to allow Unified Combatant Command to quickly evaluate model sensitivity to each variable in the model. STANA was designed to have the capability to automatically generate sensitivity data to allow the users to quickly see which variables are having the most impact. This has several benefits. First, it will allow the user to focus research efforts toward understanding these highly sensitive areas to ensure they are well understood. It will also allow the user to see how these variables are affected by changing inputs, or by adjusting relationships within the model. This diagnostic capability functions for the both the one and two player version of STANA.

While development of modeling methodology and implementation is the focus of effort for this thesis, the research provided in this thesis reveals a number of insights pertaining to Hezbollah and the other stakeholders in these models. This thesis stops short of prescribing or claiming definitive conclusions on the decision-making logic in the system or of any of its stakeholders. This would require a much more extensive examination, considering multiple formulations of each of the models and running multiple "what if" scenarios using these different formulations. In short, it is the author's opinion that the models presented have not been sufficiently validated on a broad enough range of scenarios. Nonetheless, this thesis presents some insights relating to the modeling, the methodology, and the decision system that is studied. The bullets below represent a summary of these insights.

- The most critical element in understanding a system of stakeholders is to define and understand what it is that each actor wants (i.e., their interests). Stakeholder interests drive the decision-making logic and can be complex, interdependent models in their own right. The process of modeling helps reveal the structure of these relationships.

- LH seems to have an incentive to attain its objectives politically, but LH's political base seems to be defined in terms of its opposition to Israel. As such, it is likely that LH will continue to antagonize Israel enough to ensure its base stays unified.

- Regarding Lebanese opinion outside of its base, it seems that LH should desire tacit support or at least general indifference. Should a significant portion of Lebanese reject LH outright, LH's survival may become tenuous. Therefore, LH seems bound to behave in a manner short of provoking a full Israeli response.

- If the observations above are valid, the following consequences may be in order:
    - Demonstrated constraint by Israel could, over the longer term, allow for the development of some distance between LH's base and the Lebanese population at large. Or, at a minimum, it could prevent LH from expanding support beyond its Shi'a, pro-Syrian base.
    - LH's militia may be the organization's center of gravity by providing it the instrument of power necessary to impose its will, even if the general Lebanese population were to consider rejecting LH.
- LH derives financial support and support in the court of international opinion via the Lebanese Diaspora. However, it is the opinion of this author that there exist significant correlations between Diaspora support and Lebanese Popular Opinion. That is, there is a component of Diaspora support that may be allocated by the Lebanese Population and there may be a component that is allocated independent of the Lebanese population. It is unknown to the author the extent or magnitude of each of these components. A better understanding of Diaspora's role in allocating power and resources to Lebanese political factions would enhance analysis derived from these models.
- The U.S. and Iran seem to serve similar roles in this system. That is, the U.S. and Iran are involved in a global confrontation and both LH and Israel are actors in this game. Whether or not LH and Israel serve as proxy mechanisms for these powers in not clear to the author. However, in the context of this larger conflict, LH and Israel each seem to have incentives to maintain hostile dispositions, while, at the same time, the U.S. and Iran seem to constrain Israel and LH from engaging in full-scale war. An interesting application of this model might be to run a U.S.-Iran scenario to develop a better understanding of the roles these actors should play in the LH-Israel game.

The result of the research and analysis in this thesis is a framework and methodology for development of systems of political stakeholders. Additionally, it provides a tool that, while limited, is flexible enough to allow exploration of a wide range of scenarios and

possesses diagnostic capabilities to assist the user in sharpening the model's formulation. This thesis also provides a solid consideration of the decision-making system that surrounds Lebanese Hezbollah and other important actors in the Middle East. Finally, and perhaps most importantly, this thesis is the first step toward modeling dynamic, multi-agent systems of stakeholders using influence diagrams. There is significant potential for future development of the capabilities that resulted from this thesis. Below is a brief summary of future work that could be pursued:

- Expand to explicitly model the decisions of more than two players. The current implementation is limited to one or two players.
- Improve dynamic behavior. The current implementation requires the user to specify temporal relationships and specify probability tables for each. This limits the usefulness of time dependencies. However, it seems possible to develop behaviors over time, allowing the system to "evolve" without extensive specification of probabilities by the user.
- Prior information and Bayesian updating. This thesis failed to implement a critical component of influence diagrams: prior probabilities inferred using Bayesian updating. Adding this capability would greatly enhance the usefulness of the models presented.
- Learning effects for decision makers could be added in future versions.
- Imperfect perception of the system could be built in to the implementation. Currently, both players operate on the same chance structure, essentially meaning they have the same perspective on the system. However, it is possible to allow decision makers to operate on different versions of the chance model, having the effect of analyzing decision making when the players read the situation differently.

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First, I would like to thank my wife, Jennifer, for her love and support during the seven months that went into making this a reality. I know she did the best she could, listening to my incessant rambling about why Java refused to do what I thought it should and about things like transition matrices, conditional probabilities, and backward induction. The same can be said for my two beautiful daughters, Megan and Zoe, who, incidentally, endured the same incessant ranting about things they should not have to concern themselves with. And they provided breaths of fresh air on a daily basis, as they always do.

The highly professional and genuinely dedicated personnel of the Unified Combatant Command sponsoring this research made this experience both educational and rewarding. These folks were a pleasure to work with and I know they supported my experience and education at least as much as—if not more than—I was able to support their research efforts.

A special thanks to Roberto Szechtman whose guidance kept my efforts focused and relevant. His simple, no-nonsense approach to research and his ability to see the bottom line was refreshing and instructional, and will benefit me as an analyst and as a Marine. Additionally, I would like to thank Mike Atkinson, Moshe Kress, and Aaron Burciaga for being always on-call as a sounding board for ideas, even those that were painfully misguided. Together, this group was an interesting and talented team of professionals that made this experience much more enjoyable than it had the right to be.

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I. INTRODUCTION

A. BACKGROUND AND MOTIVATION

The U.S. has significant national security interests at stake in the Middle East. Of these, two are vital: access to Middle Eastern oil and the threat posed by state/non-state actors that oppose U.S. interests. To achieve these strategic interests, the U.S. has long sought political stability in this region. However, historical tensions among Middle Eastern nations have repeatedly frustrated efforts for long-term stability in a manner favorable to the U.S. The nature of relations among state and non-state actors is so profoundly complex that policy makers struggle to understand what actions might be effective in achieving strategic objectives.

As Iran may get closer to nuclear capability, the existential threat perceived by Israel grows more compelling. Iranian leadership has made it clear that they do not recognize Israel's right to exist and have called for "extermination of the Jewish state." Israel—who most believe possess nuclear capability—has made it equally clear it will not stand for a nuclear armed Iran and has vowed to take any action necessary to prevent this outcome, including direct application of force. The current trajectory may be unsustainable, as it seems likely to lead to a nuclear-armed Iran, which could disrupt the balance of power in the region.

Recently, Unified Combatant Command has sought a new course for analysis of the Middle East region. Unified Combatant Command is currently pursuing research to improve understanding of the regional situation and key drivers of decision-making by employing analytical tools of Operations Research and descriptive methods of social sciences. In support of this effort, this thesis will analyze the system formed by state and non-state actors with political stakes in this region. The research performed for this thesis will emphasize Lebanese Hezbollah decision-making logic and the underlying forces that drive its actions.

Unified Combatant Command's ultimate goal is to become proactive in its approach to Middle Eastern policy. It seeks a well-grounded decision support methodology that will serve as an analytic forecasting aid to better understand systems involving one or more stakeholders. While focusing on Lebanese Hezbollah in this study, the intent is to develop a

model and methodology that is general and can be applied more broadly. More specifically, this thesis will support Unified Combatant Command's effort in the following ways:

- Identify and understand the logic underlying the decision-making tendencies of key stakeholders, with particular focus on Lebanese Hezbollah.
- Contribute to understanding how "shocks" influence the political system, the stakeholders within that system, and how the decision-making logic is affected by these shocks.
- Identify key factors that drive Lebanese Hezbollah decision making to help gain insight into stakeholder-decision processes.
- Analyze the nature and scope of decision-making relationships in order to identify shortfalls in current intelligence (i.e., highlight intelligence gaps).
- Provide an easy-to-use decision support tool that takes as inputs parameters of a political system (i.e., states, interests, and actions of key stakeholders), and produces:
    - Insights about possible courses of action of key stakeholders, and
    - Guidance concerning the effects of shocks to the system.

B. PURPOSE

The primary purpose of this thesis is to develop an analytic methodology that allows for the analysis of the underlying decision-making logic of a well-defined system of stakeholders. This thesis uses Lebanese Hezbollah as the subject for this analysis, at the request of Unified Combatant Command, the sponsor for this research effort.

C. RESEARCH QUESTIONS

The following research questions were posed by Unified Combatant Command:

- *How would Lebanese Hezbollah respond to an Israeli strike against Iranian nuclear facilities?*

- *Under what conditions would Lebanese Hezbollah retaliate for the death of former Hezbollah operative Imad Mughniyah?*

D. SCOPE OF THESIS

The scope of this thesis is centered on the development of a decision-support aid that allows for the analysis of the two research questions mentioned above. The intent is to develop a model that allows the user to consider decision making over time and within the framework of a multi-player decision system. Allowing the user to interact with the model will aid in understanding the system in question by requiring the user to carefully define these relationships and think through cause-and-effect associations among variables.

The model developed in this thesis will allow the user to specify the parameters of the model, the relationships, and define stakeholder interests in a manner that allows for analysis of the decisions that result from a set of inputs. Equally important is to provide the ability for the user to introduce effects—or "shocks"—that may abruptly change the decision-making situation. This will allow for in-depth analysis for the first of the two research questions considered in this thesis.

The second research question requires an analysis of the range of inputs that could induce a stakeholder—in this case Lebanese Hezbollah—to take a certain decision. Therefore, the model developed herein must have the capability to allow for easy and intuitive inputs and a mechanism for allowing the user to run repeated iterations of the model in order to investigate the situation under a wide range of circumstances.

Finally, to identify key drivers of stakeholder decisions, the model developed must provide the user with the ability to quickly and easily generate data required for sensitivity analysis. This will provide the user the ability to quickly identify which variable(s) play key role(s) in decision making, allowing analysts to focus time and resources to understand key variables and system components.

E. METHODOLOGY

1. Background Research and Literature Review

The nature of this thesis requires the fusion of social sciences and quantitative Operations Research techniques. To develop a model that represents a dynamic political

system requires a thorough understanding of the actual system. This is accomplished through a thorough review of the history of the Middle East and by visiting and interviewing regional experts from Unified Combatant Command. Additionally, other modeling approaches that seek to understand decision systems is considered and drawn upon, where applicable. Chapter II provides a thorough review of the region's history from the points of view of key stakeholders and then considers other approaches that have been attempted to address similar problems.

2. Modeling

The model for this thesis is developed in two parts. First, a conceptual representation of the models is developed drawing on concepts of Systems Analysis and Decision Theory. Influence diagrams are used to provide a means to define key relationships between stakeholders, uncertainty components, and stakeholder interests. Having conceptualized the models, the second step is to implement these models. For this, a Java application was developed to interface with Genie v2.0[1], providing the capability to solve multi-player, temporal influence diagrams. The user specifies the nature of the system, the actors, their interests, and the probability model, and the Java application solves it over the user-specified time horizon. Chapter III details the development of two models, one for each of the research questions posed by Unified Combatant Command.

3. Results and Analysis

Using one of the two models developed in Chapter III, several "what if" scenarios are considered to display how the subject questions can be analyzed using the modeling approach and applications developed in this thesis. For each of these scenarios, single-variable sensitivity analysis is conducted to display the capabilities of the Java application, which automates sensitivity analysis if the user so desires. From this

[1] Genie v2.0 is decision analysis software developed at the University of Pittsburgh. The software is free and publicly available with free registration at http://genie.sis.pitt.edu/.

sensitivity analysis emerges a more robust understanding of the key variables in this system. Chapter IV provides the results and analysis of a few select scenarios.

F. ASSUMPTIONS

- Rational under uncertainty. The models developed in this thesis are solved using decision analysis software—with the mentioned modifications—that solves the models based on the expected utilities of available actions. This implies that the decision makers in this analysis are rational under uncertainty, satisfying the well-known rationality axioms. For a complete listing of the rationality axioms, refer to James N. Webb's *Game Theory: Decisions, Interaction, and Evolution* (2007).

- Unbounded rationality. The algorithm that solves the models is based on dynamic programming and backward induction. Since all players satisfy the rationality axioms, this implies that each stakeholder has the ability to calculate his own and his opponent's expected utility over the entire user-specified time horizon, whether that time horizon is two or fifteen time steps. Of course, many decision makers do not have the ability to assess uncertainty accurately. This is especially true of future uncertainty. If a decision maker can't calculate future uncertainty, then he will have difficulty calculating his and his opponent's future expected utilities, which are the basis for these decisions. However, backward induction requires just these sorts of calculations.

- Equivalent perceptions between players. All players operate on the same probability model. As such, there is an implied assumption that both players perceive the system's uncertainty in exactly the same way.

G. KEY TERMS AND DEFINITIONS

- **Actions**. Actions are applications of an actor's resources that (may) influence the state of one or more stakeholders. The set of feasible actions may depend on the state of the system.

- **Stakeholders (or actors).** The countries, political organizations, or groups that play a key role in the outcome of a political/military situation.

- **Interests.** Each stakeholder has interests it cares about. Interests are discretized into 2–3 factors.

- **Factor.** The possible outcomes of an interest (i.e., high or low, strong or weak).

- **Utility.** The value a stakeholder places on a combination of interest factors.

- **Salience**. Salience is an absolute measure of magnitude that indicates how much a stakeholder cares about an interest.

- **Power**. Power is an absolute measure of the capabilities a stakeholder possesses in the context of the system. These capabilities can be real (such as military or economic strength) or abstract (such as religious or ideological).

- **Influence**. Influence is a relative measure that is the product of Salience and Power (salience x power). It can be thought of as the influence of a stakeholder relative to the sum of all potential influence that exists in the system. A stakeholder may be extremely powerful (i.e., the U.S.), but not care (low salience). On the other hand, a stakeholder may be relatively weak, but may spare no effort in achieving its goals (de Mesquita 2009).

- **State Space.** The state space of a stakeholder with interests x and y is the set $\{(x_i,y_j):i,j = 1,2,3\}$ formed by the possible interest level combinations, (x_i, y_j). Each instance is a state of a stakeholder.

- **Shocks.** Shocks are events that have a significant impact on the outcome of the situation. Shocks may be triggered by stakeholders' actions or by external events (e.g., nature, non-stakeholder entities, etc.).

II. BACKGROUND RESEARCH AND LITERATURE REVIEW

A. INTRODUCTION

This chapter reviews and explores the historical and political context of the regional actors in the Middle East, as it pertains to the questions addressed by this thesis. The purpose of this chapter is to develop the foundation for a robust understanding of who the key actors are in this political system (e.g., the stakeholders), each stakeholder's situation (e.g., its state), what each stakeholder wants (e.g., its interests), and what actions each stakeholder may have available to enable it to achieve its interests. The stakeholders considered in this thesis are: The Islamic Republic of Iran (IR), Lebanese Hezbollah (LH), the United States (U.S.), Israel (IS), and Syria (SY).

B. HISTORICAL CONTEXT AND GEOPOLITICAL ANALYSIS

This section begins with a brief discussion of origins of conflict, and then discusses modern history from three perspectives:

- History of Iran. This section focuses on the Iranian Revolution, Iran in the context of the U.S. Global War on Terror, and Iran's nuclear program.
- History of Lebanon. This section focuses on the period from 1975 to present, emphasizing the Lebanese Civil War and its relationship to Hezbollah, Syria, and Iran.
- History of the U.S. in the Middle East. This section focuses on the history of U.S. Middle East involvement.

1. Origins

a. Islam

The origin of one conflict in the Middle East can be traced to the founding of Islam— and the "Great Schism" that followed between the Sunni and Shi'a sects (Farndon 2007). After the Prophet Mohammad returned to Mecca in 630 AD, he ruled for only two years before his death in 632 AD. He left only a daughter, Fatimeh, who could not rule due to Arab custom. The patriarchs of Mecca selected a Caliph to succeed Mohammad, beginning the Umayyad Dynasty. This is where the Sunnah—or tradition—was born,

leading to what is known today as the Sunni tradition of Islam (Farndon 2007). However, Fatimeh, Mohammed's eldest daughter, had a husband, Ali, and two children, Hussein and Hassan. Many considered this the legitimate royal family, bearers of Mohammad's true bloodline. Ali led an exemplary, humble life and attracted a considerable following that came to be known as the Shi'a Ali, the founding of what is known today as Shi'a Islam (Farndon 2007).

Fatimeh's son, Hussein, became an important figure to Shi'a for his link to Persia and his model of martyrdom, self-sacrifice, and social justice (Farndon 2007). Hussein is believed to have rescued the last Persian princess from persecution at the hands of the Umayyads, the Sunni invaders of Persia (Farndon 2007). This established a connection between Persians and Shi'a Muslims. Hussein is also the Shi'a symbol of martyrdom and self-sacrifice because of his stand at Karbala against the Umayyad leader. Greatly outnumbered, Hussein was "hacked to pieces and beheaded." This sacrifice would forever link Shi'a Muslims to the city of Karbala (Farndon 2007). The Karbala massacre inspired the Ashura, an intense and emotional remembrance of Hussein's sacrifice that forms the basis of a common narrative on Shi'a concepts such as social justice (Farndon 2007), martyrdom, and struggle against oppression (Norton 2007).

Persian—and therefore Iranian—ties to Islam also date to the 7th century AD when the Arab Muslim army swept into Persia and displaced the Sassanid Dynasty (Farndon 2007). Persia's religious origins are based on Zoroastrianism, thought to be the first religion to divide the world into good and evil (Farndon 2007). Due to the corruption of their Sassanid rulers, Persians embraced Islam and the Koran—particularly Shi'ism—and incorporated elements of Arabic culture and language into their society (Farndon 2007). However, despite the quick rise of Islam in Persia, Persian culture endured and began to "seep back into Islam" in what John Farndon describes as a "Persian Renaissance" that occurred from the 8th–11th centuries (2007).

Today, Sunnis comprise 85–90% of all Muslims (Slavin 2008). The only place where Shi'a Muslims are the majority is in the Islamic Republic of Iran, southern Iraq, and southern Lebanon (Coughlin 2009) and have considerable constituencies in Afghanistan, India, Pakistan, and the Persian Gulf (Slavin 2008). Within Shi'a Islam, there are sub-sects based on the number of Imams recognized. The Druze recognize 5 Imams, the Ismailis 7,

and Iranian Shi'a recognize 12 (Farndon 2007). Iranian Shi'ism is often called "Twelver Shi'ism" (Farndon 2007). The 12th Imam is the "hidden Imam, " or Mahdi, who will one day return to rid the world of all injustice (Farndon, 2007).

b. Palestine-Israel Conflict

The Israeli-Palestinian conflict centers on claims on an area historically known as Palestine[2]. This conflict dates to the end of the 19th century where severe Jewish persecution led to the rise of Zionism[3] (Harms 2008). Despite the historical tracings of Palestinians and Israelis, the events that led to the Palestine-Israel conflict as it is known today actually originate in the 20th century, with the results of World War I laying the foundation for conflict and then World War II formalizing those results (Harms 2008). Since the mid-20th Century, the Palestine-Israel conflict has been a central impediment to Middle Eastern peace and stability, and remains so today. This section briefly reviews events considered critical to the development of this conflict.

(1) World War I—World War II. During World War I, Britain, France, and Russia created spheres of influence in what was then known as the Ottoman Empire (Harms 2008). The Ottoman Empire sided with Germany in the war and, as consequence of Allied victory, was divided up by the victorious powers in a system known as a mandatory (Harms 2008). After World War I, the mandates were distributed in the San Remo conference of 1920 where it was determined that Great Britain would be the mandatory for Palestine, Transjordan, and Iraq while France would be the mandatory for Lebanon and Syria (Harms 2008). As Palestine's mandatory power, Britain made a string of promises, the most notable of which was the Balfour Declaration of 1917 that made conflicting promises. To Zionists the declaration promised Jewish settlement in

2 From Encyclopedia Britannica: The word Palestine derives from Philistia, the name given by Greek writers to the land of the Philistines, who in the 12th Century BC occupied a small pocket of land on the southern coast, between modern Tel-Aviv and Gaza. According to Gregory Harms in The Palestine-Israel Conflict, Palestine was not a singular administrative geo-political entity until the advent of European nationalism in the early 20th Century (Harms 57–58).

3 According to Gregory Harms, "the desire for a safe haven state…motivated almost exclusively by what they suffered and endured in Russia" (Harms 51). For a more thorough treatment on the origins of Zionism as a geo-political entity, refer to Gregory Harms' The Palestine-Israel Conflict.

Palestine, while to Arabs living in Palestine, it pledged that "nothing shall be done which may prejudice the civil and religious rights of existing non-Jewish communities in Palestine" (Harms 2008).

However, World War II resulted in a global redistribution of power. Britain was broke and beleaguered and began to concede much of its colonial holdings, including Palestine (Harms 2008). The U.S. was torn between sympathy for the Zionist cause and its desire to curry favor with Arabs in its effort to contain Russian expansion (Harms 2008). Together, the U.S. and Britain convened a council to help solve the "immigration/refugee impasse" but, by February 1947, the British had decided to take its hands out of the conflict and left the issue to the UN General Assembly (Harms 2008).

(2) 1947–1948: UN Partition, Israeli Statehood, and War. With the U.S. and Russia in favor, the UN General Assembly voted on 29 November 1947 to pass Resolution 181 to establish "two states, Jewish and Arab, with Jerusalem existing as an international entity" (Harms 2008). With questionable legal authority for the UN to partition Palestine, and because it amounted to the U.S. and Europe giving 56% of Palestine to 30% of its population, Arabs were outraged and refused to accept the resolution (Harms 2008). This resulted in a war between Jews and Palestinian Arabs (the civil war from November 1947 to May 1948) and then between the new state of Israel and the surrounding Arab states of Syria, Jordan, Egypt, Iraq and, to a lesser extent, Lebanon (Harms 2008). By war's end, the area of Palestine would assume its present-day form (Harms 2008).

The first phase of this war—between Jews and Palestinian Arabs—would result in the official beginning of the Palestinian refugee crisis. During this conflict, an estimated 300,000 Palestinians would be displaced (Harms 2008). The second phase, known as the Arab-Israeli War of 1948, was sparked when David Ben-Gurion declared the establishment of the state of Israel on 14 May 1948, one day before British possession officially expired (Harms 2008). This declaration immediately sparked a full-scale war. The war resulted in a clear Israeli victory, which was codified in the 1949 Armistice agreement (Harms 2008). Israel expanded its territorial holding from 56% of Palestine to 78%, including possession of Gaza from Egypt and the West Bank from Transjordan (Harms 2008). A total of 700,000 Palestinian refugees were displaced and distributed between Israel,

the West Bank, Gaza, and neighboring Arab states (Harms 2008). By the end of the 1947–1948 Wars, Israel became a fixed reality in the Middle East, and the mass migration of Palestinian refugees into neighboring states would eventually lead to the Palestine-Israel conflict being broadened into an Arab-Israeli conflict (Harms 2008).

(3) 1967: The Six-Day War and UN Resolution 242. Following the 1947-48 Wars, Israel and its neighbors remained in a state of "no war-no peace" characterized by sporadic cross border violence that, against a Cold War backdrop, would frame and build toward the next conflict (Harms 2008). In 1956, Egyptian leader Gamul Abdul Nasser defiantly decided to nationalize the Suez Canal (Harms 2008). Britain, France, and Israel devised a plan in which Israel would invade to recapture the canal, and then Britain and France would intervene and make Nasser an offer he had to refuse (Harms 2008). Once refused, Britain and France would then have justification to directly intervene and regain control of the canal (Harms 2008). The UN, U.S., and Russia all harshly condemned the action and passed a resolution calling for a cease fire. However, Israel succeeded in reclaiming Sinai first (Harms 2008). The Suez Crisis resulted in regional recognition of Israel as a formidable military power. However, it also resulted in Nasser becoming a nationalist Arab hero and it hardened many Arabs' view of Israel as a tool of colonial Western imperialism (Harms 2008).

The Suez Crisis was followed by continuing cross-border violence and infiltration into Israel through the late '50s and into the '60s, inching the region closer to another war (Harms 2008). The recently formed militant group Fatah[4] (1958) began a campaign of incursions into Israel in 1964 and the Palestinian Liberation Organization[5] (PLO), while lacking organization, provided ideological support to Israeli resistance (Harms 2008). The increase in violence eventually led to a harsh reprisal by Israel on the West Bank town of Samu, where homes and buildings were destroyed and 18 civilians were killed

4 Al-Fatah was founded in 1958 and was led by a young nationalist name Yasser Arafat. Fatah, compared to the early PLO, operated with "far greater ideological resolve" and "felt violence should precede diplomacy and politics" (Harms 108).

5 The PLO was founded in May 1964 and came under the control of Egyptian leader Gamul Abdul Nasser (Harms 108).

(Harms 2008). Neither Jordan nor Egypt responded, resulting in harsh Arab condemnation of the two leaders as being weak on Israel (Harms 2008).

With tensions high, reports began to emanate about an Israeli troop buildup. Though the reports were verifiably false, it began a sequence of mobilization and preparation actions that culminated in Israel's pre-emptive invasion of Jordan on 5 June 1967 (Harms 2008). Within three hours, Israel destroyed the air forces of Jordan, Egypt, and Syria; within six days, it achieved decisive victory (Harms 2008). With the end of the war, Israel had tripled its size by gaining control of Sinai, Gaza, the West Bank (including all of Jerusalem), and the Golan Heights (Harms 2008). Additionally, with the acquisitions of Gaza and the West Bank, Israel came in control of 1.1 million Palestinians (Harms 2008). UN Resolution 242 officially ended the war and became the basis for all peace negotiations, and remains so today (Harms 2008).

UN Resolution 242 added another document to the list of ambiguous agreements that would complicate attainment of Middle East peace. The gist of 242 is "land for peace," essentially calling for Israel to relinquish control of territories acquired during the war while Arab states would acknowledge sovereignty and territorial integrity of "every state in the region" (Harms 2008). However, Israelis interpret the document to mean relinquish "some of the territories" and Arabs interpret to mean "all of the territories" (Harms 2008). With the exception of Sinai, the borders established after the 1967 war are essentially the same as they are today (Harms 2008). Resolution 242 also had the effect of reducing the Palestinian issue to a human rights problem by affirming necessity "for achieving a just settlement of the refugee problem" (Harms 2008). UN Resolution 242 has and continues to be the basis of all efforts at resolution of the Palestine-Israel conflict (Harms 2008).

(4) Palestinian Nationalism, the PLO, and the Yom Kippur War. With over 1 million Palestinians living under Israeli occupation, a sense of Palestinian identity began to emerge (Harms 2008). Israel's humiliation of its Arab neighbors fuelled resistance and its occupation of territory won at Arab's expense combined to fuel an increasing shift toward militant resistance to Israel on behalf of Palestinians (Harms 2008). This combined with the reduction of Palestinians to a human rights issue from UN Resolution 242, led to groups such as Fatah and the PLO seeking international recognition through terror. In March 1968, Israel cracked down on Fatah headquarters in Karmeh, Jordan, which

had the effect of driving thousands of Arab nationalists into Fatah and the PLO (Harms 2008). By 1968 in Jordan, the PLO had become a state within a state and had revised its charter specifically in terms of "armed struggle" against "Zionist and imperialist presence" (Harms 2008). In 1969, Yasser Arafat—leader of al-Fatah—was elected chairman of the PLO (Harms 2008).

Relentless provocations by the Popular Front for the Liberation of Palestine[6] (PFLP) brought harsh reprisals by Israel, which "King Hussein of Jordan wished to avoid" (Harms 2008). Violence erupted between the Jordanian Army and the PFLP resulting in a small-scale war inside Jordan. The Jordanian Army handily defeated the PLO, leaving thousands dead in what came to be known as Black September (Harms 2008). The matter was settled by the Cairo Agreement of 27 September 1970 and, within a year, Hussein had expelled the PLO from Jordan. The PLO moved their base of operations to Lebanon, where the PLO would further destabilize an already unstable country (Harms 2008).

While events in Jordan were unfolding, Israel was engaged in tit-for-tat violence with Egypt, mainly over control of the East Bank of the Suez Canal (Harms 2008). Egypt was now under the leadership of Anwar Sadat, since Nasser died the day after signing the Cairo Agreement (Harms 2008). Sadat, courting Soviet sponsorship, was trying to gain control over territories previously lost to Israel. In an effort to achieve this, Sadat tried to unilaterally negotiate with Israel, but Israel refused to relinquish territory, at least partially owing to U.S. pressure aiming to minimize Russian influence in the region (Harms 2008). Having failed to achieve ends diplomatically, Sadat went to work in 1973 against Israel by engaging Syria in war plans—a surprise attack—to help both nations to regain lost territories (Harms 2008). Egypt and Syria attacked the Sinai and Golan, respectively, on 6 October 1973 in what came to be known as the Yom Kippur War (Harms 2008). Israel sensed an attack was coming, albeit late, but decided against preempting the attack for fear of losing U.S. aid (Harms 2008).

6 The Popular Front for Liberation of Palestine (PFLP) is one of the more militant organizations within the Palestinian Liberation Organization (Harms 119).

Though caught on its heels, the Israeli Defense Force (IDF) recovered and managed to fight off both Syria and Egypt (Harms 2008). Israel turned the tide and ended up claiming more of the Golan than it previously possessed and, with respect to Egypt, crossed the Suez and pushed into the mainland (Harms 2008).

In agreements known as Sinai I and Sinai II, Israel relinquished some of its gains in the Golan in return for Syria's non-belligerence (Harms 2008). Israel managed a military victory, but paid a heavy political price through popular resentment and anger toward its leadership (Harms 2008). Egypt, on the other hand, had been dealt a severe military defeat, but managed a psychological and moral victory. Egypt had earned international recognition for its territorial dispute with Israel and, more importantly, gained a good relationship with the U.S. (Harms 2008).

(5) Camp David Accords (1978). Between the Yom Kippur War of 1973 and 1978, there had been a turnover of leadership in the U.S. and Israel. Jimmy Carter was elected in 1976 and brought the hope of settling the conflict with multilateral negotiations (Harms 2008). Sadat—still leading Egypt—was interested in repairing Egypt's economy and reclaiming the Sinai. Israel saw a turn toward hard-line conservative thinking with the emergence of the Menachim Begin and the Likud party, who emphasized intention to retain the West Bank and Gaza (Harms 2008). It was under Begin and the Likud Party the issue of settlements[7] would become a political focal point (Harms 2008).

The Camp David Accords were a multilateral meeting between the U.S., USSR, Israel, Jordan, and Egypt and was patterned on Resolution 242, as it called for a resolution to the Arab-Israeli conflict, settlement of the Palestinian refugee issue, and Israel's withdrawal from "territories occupied" (Harms 2008). The accords were signed as a framework for continued peace negotiations. While many issues were not addressed (i.e., occupation of East Jerusalem and Golan Heights) and others were left to final determination (i.e., West Bank and Gaza), the accords resulted in a lasting peace between Egypt and Israel, attended by Israel's withdrawal from the Sinai (Harms 2008). Though Israel and Egypt

[7] Settlements are housing and land developments where civilians from the "occupying power" take up residence in the occupied territories. The UN asserts that settlements are illegal based on (1) the Geneva Convention Relative to the Protection of Civilian Persons in Time of War (August 12, 1949); and (2) the Hague Convention IV of 1907.

established a lasting peace, not everyone was happy with it. In 1981, Anwar Sadat was assassinated by extremists who were displeased with Sadat's foreign policy (Harms 2008).

(6) Lebanon, the PLO, and the First Intifada. The Lebanese Civil War (this will be discussed in more detail later) and the PLO presence in Lebanon created a platform for Palestinian resistance against Israel. Israel's military intervention in Lebanon began with Operation Litani in March 1978, a reprisal for PLO commandos hijacking a bus near Haifa (Harms 2008). Israel occupied southern Lebanon for three months before UN Resolution 425 called for Israel's withdrawal and establishment of UN Interim Force in Lebanon (UNIFIL) (Harms 2008). But clashes between Israel and the PLO continued with Israel conducting heavy bombing raids in south Lebanon and Beirut in 1981 and the PLO sending artillery and rocket attacks into northern Israel (Harms 2008). Israel would launch a full-scale invasion (80,000 troops) in June 1982 aimed at the destruction of PLO forces in Lebanon (Harms 2008). Israel quickly dismantled resistance in southern Lebanon and moved on to seal off Beirut. The Israeli forces proceeded to shell Beirut for the next few months (Harms 2008). Arafat was forced to withdraw from Lebanon in August of that same year (Harms 2008). A few months later, the recently elected president of Lebanon, Bashir Gemayal, was assassinated in East Beirut. Gemayal shared the Israeli desire to dismantle the PLO in Lebanon (Harms 2008). As a result, 150 Phalangist[8] militiamen entered Beirut and massacred between 800 and 2,000 unarmed Palestinians in the Sabra and Shatila refuguee camps, without any intervention by Israeli forces (Harms 2008).

The wars in Lebanon and the Sabra and Shatila massacres caused internal divisions within Israel and the PLO. Israelis began to protest the Begin administration for its list of failed achievements—i.e., lost Israeli lives, no peace treaty, and increased Palestinian nationalism (Harms 2008). Begin resigned his premiership and retired into obscurity (Harms 2008). The elections that followed showed a polarized public, with the Likud and Labor parties splitting the vote. This resulted in a coalition government with Yithak Shamir and Shimon Peres representing the Likud and Labor parties, respectively (Harms 2008). Yasser Arafat, now relocated to Tunis, faced deep divisions of his own.

8 The Phalanges Libanaises was founded in 1936 by Pierre Gemayel. Its initial aim was to protect the Maronite position in Lebanon; in 1958 it entered the political arena to oppose growing Arab nationalism (tiscali.co.uk).

Palestinians saw a weak response to the Sabra and Shatila massacres and began to view Arafat as a too-moderate diplomat willing to concede to foreign powers (Harms 2008).

With the PLO leadership defeated, continuing strife in Lebanon, and continued Israeli occupation, Palestinians were politically isolated (Harms 2008). This combined with a budding Palestinian youth movement and increasing influence of Muslim militant groups to set conditions for rebellion (Harms 2008). All that was needed then would be a spark, and it was provided on 8 December 1987, when an IDF vehicle crashed into a truck carrying Palestinian laborers (Harms 2008). Demonstrations followed immediately and Israeli forces, believing this to be another routine demonstration, attempted to suppress the demonstration with rubber bullets and tear gas (Harms 2008). However, the demonstration erupted into what came to be known as the Intifada ("shaking off" or uprising), and was the beginning of four years of active resistance to Israeli occupation resulting in over 100 Israeli and 1,000 Palestinian deaths (Harms 2008). By 1991, the Intifada began to fade and deteriorate, due primarily to infighting among the various factions. However, "four years of resistance and protest not only withstood severe oppression, but was unified by it" (Harms 2008). The Intifada also led to a sharp increase in the popularity of a new radical group called Hamas, who emerged from the Muslim Brotherhood in January 1988 (Harms 2008). Hamas, unlike the PLO who wanted a secular state in the West Bank and Gaza, wanted an Islamic state in all of Palestine and was willing to achieve this through armed violence if necessary (Harms 2008).

(7) The Peace Process. With the end of the Cold War, Lebanon's Civil War, and the Intifada winding down, the 1990s presented an opportunity to pursue peace through diplomacy. The situation in 1991 was this: The U.S., now as the world's sole superpower, garnered some support from a few Arab states. The former Soviet clients of Syria, Iraq, and Libya were left without backers after the collapse of the Soviet Union (Harms 2008). The PLO, who had sided with Saddam Hussein in the Gulf Crisis of 1991, was suffering an image crisis with much of the world having a negative

opinion of the PLO (Harms 2008). The following section captures the most important peace initiatives advanced over the last two decades with brief commentary on the essential elements and importance of each:

- Madrid Conference 1991–1993 (Harms 2008): Based on UN 242, 338, and Land-for-Peace. Parties: Lebanon, Egypt, Israel, Syria, U.S., USSR, and joint Jordanian-Palestinian delegation. Significance: First time these parties had gathered face to face and the first time Israel and Palestinians met in open dialogue.

- Oslo Accords—September 1993 (Harms 2008): Secret negotiations between Israeli and PLO leadership that ran concurrently with the final year of Madrid Conference. Oslo was not a treaty but an agreed agenda from which to negotiate. Significance: Mutual recognition and Declaration of Principles. Mutual Recognition was in the form of exchanged letters between leaders of Israel and the PLO. Declaration of Principles was the outlining of responsibilities for each party. Main agenda items include: Israel withdrawal from "Jericho area" in the West Bank and establishment of Palestinian security force and governing authority. Permanent status negotiations would begin in two years and final settlement to be achieved within five years.

- Oslo II—September 1995 (Harms 2008): Also known as the Taba Accords, Oslo II was the "two-year" negotiation follow-up set forth in Oslo I. Parties: PLO and Israel. Significance: Established zones of control (A,B,&C) in West Bank designating civil and administrative spheres of Palestinian jurisdiction. The language used was vague and left matters open for interpretation. Extremists in the PLO and Israel took offense to what they saw as excessive territorial concessions. Yitzhak Rabin was assassinated on 4 November 1995 by an extremist citing these concessions.

- Hebron Agreement (1997) (Harms 2008): Reaffirmation and continuation of Oslo II. Parties: Israel and Palestinian Authority[9] (PA). Significance: Called for Israel to

[9] The Palestinian Authority (PA) was established as result of the 1993 Palestinian-Israeli Declaration of Principles established during the Oslo Accords. The Palestinian Authority's purpose was to provide a governing body for the Palestinian refugees. The Oslo accords gave the PA the responsibility to combat terrorism and coordinate security with Israel. The first Palestinian elections were held on 20 January 1996, where Yasser Arafat was elected the first president of the PA (palestinefacts.org 2010).

make further withdrawals from West Bank, provide safe passage route between West Bank and Gaza, and open the Gaza airport. Palestinian Authority was to fight terrorism, provide security cooperation, and prevent terrorist "incitement and propaganda." Continuing settlement construction and terrorist attacks derailed negotiations so no progress was achieved.

- Camp David II (2000) (Harms 2008): New premier Ehud Barak desired to abandon Oslo process for final status settlements, but Palestinians and Israelis were too far apart on too many issues. Barak offered between 60–70% of West Bank, though the areas were noncontiguous. In the end, Arafat rejected the agreements, but the fact that refugees and Jerusalem were open to discussion was, according to Gregory Harms, "pathbreaking." In the end, however, no final status settlements were achieved.

- Clinton Plan and Taba Statement (23 December 2000) (Harms 2008): Parties: Israel, PLO, and U.S. Highlights of the agreement included: (1) Palestinian state consisting of Gaza and 94-96% of West Bank; (2) principle that Arab areas are Palestinian and Jewish areas are Israeli with East Jerusalem as Palestinian capital; (3) settlement of the refugee problem. The Clinton Plan was agreed upon as a declaration of intent and as an expression of the "spirit of hope and mutual achievement."

- Road Map to Peace (2003) (Harms 2008): April 30, 2003, the "Quartet"—U.S., European Union, the UN, and Russia—issued a document that established a three-phase, performance-based plan for a "comprehensive settlement of the Israeli-Palestinian conflict by 2005. The distinction of the Road Map is that it calls specifically for "ending terror and violence" as a necessary precursor for moving forward with the peace process. It also calls for the rebuilding of the Palestinian Authority to include appointment of a prime minister. The Israelis, according to this document, were to improve the humanitarian situation in the occupied territories, "freeze all settlement activity," and "dismantle settlement outposts erected since March 2001."

- Track II Diplomacy – Geneva Accord (Harms 2008)**:** Also known as the "Eighth day of Taba" as it represents an effort to complete what was started with the Clinton plan. This plan was negotiated by Yossi Beilin (Israel representation) and Yasser Abed

Rabbo (Palestinian Authority). The Geneva Accord lays out the following: (1) Two-state solution based on the 1967 Green Line[10]; (2) a corridor linking the West Bank and Gaza; (3) a demilitarized Palestinian state; (4) "mutually recognized capitals in the area of Jerusalem under their respective sovereignty"; (5) Palestinian sovereignty of the Haram al-Sharif, Israeli sovereignty of the Western Wall; and (6) an opportunity for refugees to return to the state of Palestine. The Geneva Accord became popular internationally and within both Israel and Palestine, with 53% and 56% approval ratings respectively. However, the plan received little support in Washington and was outright rejected by Ariel Sharon.

- Disengagement Plan (Harms 2008): In February 2004, Ariel Sharon unilaterally announced his plan to withdraw from Gaza. Essentially, the plan called for removal of all Israeli forces and settlements while maintaining supervisory control of the territory from just outside the borders. The plan received criticism from both sides of the political spectrum. The right criticized it as an unnecessary relent that inhibited the settlement movement, and the left saw it as a ploy to freeze the peace process, with one Likud Party leader putting it, "Anyone who thinks it is Gaza first is mistaken. It is Gaza only." In any case, the withdrawal was executed in August 2005. Whether it amounts to a removal of occupation is still a debated issue.

- Saudi Proposal (2007) (Harms 2008): At a 2-day summit in March 2007 held in Saudi Arabia, a proposal was unanimously approved by Arab leaders that reiterated the 2002 Saudi proposal. The essence of the plan is land-for-peace. The following is from a New York Times column by Thomas Friedman and sums up the proposal (*New York Times*, 17 February 2002):

> In return for a total withdraw by Israel to the June 4, 1967, lines, and the establishment of a Palestinian state, the 22 members of the Arab league would offer full diplomatic relations, normalized trade and security guarantees. Full withdrawal, in accord with UN Resolution 242, for full peace between Israel and the entire Arab world.

(8) The Second Intifada (2000-2003/4). The Second Intifada was sparked by inflammatory political gestures by Ariel Sharon that were aimed at then-Prime

10 The 1967 Green Line represents the borders, as established by UN Resolution 242, after the 1967 War.

Minister Ehud Barak's policies (Harms 2008). Sharon was outspoken against land concessions and to publicize this he paid a provocative visit to Temple Mount / Haram al-Sharif in Jerusalem, escorted "by 1,000 Israeli police and soldiers" on 28 September 2000 (Harms 2008). The visit was met with Palestinian demonstrators to block the visit and conflict broke out resulting in four Palestinian demonstrators being killed (Harms 2008). The following day the intifada erupted with much more force and violence than the previous one, taking on "features of all-out warfare" (Harms 2008). The Second Intifada was inspired—at least partly—by Hezbollah's rise to prominence in Lebanon, as indicated by its perceived success in driving Israel out of southern Lebanon earlier in 2000 (Norton 2007). The rise of militant Islam that had evolved over the previous two decades was now being felt directly in the Palestine-Israel conflict. Palestinian protestors replaced "stones, bottles, and burning tires" by roadside bombs and automatic weapons, while the Israelis would routinely use tanks and combat helicopters to maintain control (Harms 2008). Numerous terror groups were operating in the West Bank and Gaza, including: Hamas, Islamic Jihad, Tanzim, al-Aqsa Martyrs Brigade (Harms 2008). These groups "aimed almost exclusively at harming and killing Israeli civilians (Harms 2008).

In 2000 and 2001, the U.S. and Israel saw leadership changes that resulted in a dramatic shift back to hard-line policies. In the U.S., George W. Bush was inaugurated in January 2000, while Ariel Sharon replaced Ehud Barak in February 2001 (Harms 2008). The Bush administration initially maintained some distance from the conflict, but that would change after the 9/11 terror attacks in 2001 (Harms 2008). Taking a hard-line stance against terror, the U.S. and Israel both held that peace negotiations could not proceed until terror attacks ceased. The Palestinians, thoroughly familiar with Sharon's history[11], were further incensed with his election (Harms 2008). Under Sharon, terror attacks against Israeli civilians "dramatically increased" with "shopping malls, restaurants, and public buses" becoming common sites of suicide attacks (Harms 2008).

Sharon responded to the escalation of violence with Operation Defensive Shield, launched from March to April of 2002 (Harms 2008). Israeli forces

[11] Ariel Sharon is remembered for his role as Israeli Defense Minister during the Sabra and Shatila massacre of 1982, where Palestinians believe he intentionally looked the other way while 150 Phalangist militia-men entered the refugee camps and massacred between 800 and 2,000 unarmed Palestinian civilians (Harms).

reoccupied the territories they had withdrawn from after Oslo and destroyed the "civilian and security offices" of the Palestinian Authority (Harms 2008). The worst of the fighting occurred in the Palestinian town of Nablus and the Jenin refugee camps, where 497 Palestinians were killed, over 2,800 refugee housing units were destroyed, and 878 homes were demolished leaving 17,000 people homeless (Harms 2008).

Sharon's next plan to curb the terror threat was a security fence, known as "the Wall," built from the "north end of the West Bank" and roughly tracing the border as it heads south (Harms 2008). Construction of the wall began in June 2002 and, as of January 2007, 256 of its projected 436 miles had been completed (Harms 2008). The security fence is seen by many as a forced and permanent way to annex parts of the West Bank, and as a result has received harsh condemnation by the international community and the UN (Harms 2008). According to Human Rights Watch in its *World Report 2007*:

> 85 percent of the wall extends into the West Bank…it would mean Israel's annexation of approximately 10 percent of the West Bank, including all major settlements there, all of which are illegal under the Geneva Convention, as well as some of the most productive Palestinian farmlands and key water resources.

According to Gregory Harms, "the barrier remains a controversial subject and has become elemental in the [Palestine-Israel] conflict" (2008).

(9) 2006: Gaza, Lebanon, and Israel's 34-Day War with Hezbollah. Violence emanating from Gaza continued well after the Disengagement Plan of 2005 had been executed (Harms 2008). On June 24, 2006, Israeli soldiers entered Gaza and kidnapped two Palestinians who were believed to be connected with the terrorist group Hamas (Harms 2008). In response to this kidnapping and because of the approximately 9,000 Palestinians held under "administrative detention" by Israel, Palestinian militants attacked an IDF post "killing two soldiers and abducting a third" (Harms 2008). Israel responded harshly with Operation Summer Rain featuring the "bombing of roads, bridges, and water tanks" (Harms 2008). Additionally, Israeli forces seized 74 members of Hamas, "including 23 legislators," and "buzzed the home of Syrian President al-Assad in Damascus" to send a message to Hamas leadership believed to be there (Harms 2008).

Just one month later (July 2006), Hezbollah crossed Israel's border and abducted two Israeli soldiers in what appeared to be a pre-planned attack with a multitude of objectives (discussed in more detail later) (Harms 2008). According to Gregory Harms, the attack was partly an effort at achieving prisoner swaps for Lebanese in Israeli jails and partly an effort to remove pressure from the Palestinians in Gaza "by making Israel fight on two fronts" (2008). In any case, Israel responded to this incursion with swift military action, responding with over 7,000 air strikes, 2,500 naval bombardments, killing between 250–500 Hezbollah fighters, and killing between 800–1,200 Lebanese civilians (Harms 2008). Despite this, Hezbollah proved resilient and gained recognition as a formidable resistance force, as Harms puts it (2008):

> Its fighters inflicted severe and abundant damage on IDF equipment, including the destruction of a tank and a gunboat off the coast of Beirut, sustained a month-long conflict with a vastly superior military power, and remained intact when the dust settled.

Hezbollah's war with Israel transcends the Palestine-Israel conflict and invites analysis of many environmental factors and regional conflicts. It will be discussed in more detail in later sections.

(10) Recent Developments and Trends. The period since the Summer of 2006 has been largely transitional in nature. As a result of Israel's performance in its 2006 war with Hezbollah, Ehud Olmert's—the current Israeli Prime Minister—position was "precarious at best" (Harms 2008). Following up Sharon's Disengagement Plan of 2005, Olmert announced his "Convergence Plan" in 2006, which essentially calls for withdrawal "from a percentage of settlements in the West Bank, corresponding to the wall" (Harms 2008). Many see this as a continuation of policies aimed at circumventing negotiations and that aim to create a compartmented Palestinian state of Israel's own design (Harms 2008). Of recent import in Israeli politics is the issue of demographics. The need for Israel to "realize some form of a Palestinian state" may be derived from the recognition that the long term trend will likely result in Israel becoming the minority between "the Jordan River and the Mediterranean Sea" and a Palestinian state would be useful in a prospective effort to limit immigration of Israeli Arabs that marry Palestinians (Harms 2008).

Internecine violence within the Palestinian Authority has "added one more woe to life in the occupied territories" (Harms 2008). Hamas and Fatah, in a struggle for PA leadership and direction, have engaged in "periodic gunfire and skirmishes" which reached a boiling point in 2007 when Hamas forcibly took control of Gaza (Harms 2008). Palestinian Authority leader Mahmoud Abbas "declared a state of emergency" and dissolved the coalition government (Harms 2008). The U.S., EU, and Israel all threw its support behind Fatah—the less militant of the two factions—and promised a resumption of aid if Fatah led the Palestinian Authority's coalition government (Harms 2008). However, some Palestinians see the trend toward a Hamas-controlled Gaza and a Fatah-controlled West Bank "as ominous" to the Palestinian cause. As one Palestinian legislator put it, "This is the end of the Palestinian state. If you have two separate systems, there is no way that you can have a Palestinian state that is contiguous" (Harms 2008).

2. Brief History of Iran

a. Introduction

The 1979 Iranian Revolution—also widely known as Khomeini's Revolution—heralded a new era of militant, fundamental Islam and high-stakes confrontation with the West. Iran's Revolution and its legacy have defined the Middle East for the past three decades, and many—if not most—modern Middle East conflicts can be traced directly to the great ideological upheaval that has followed since. Today, Iran is in a direct stand-off with the U.S. and the West over its aggressive nuclear program, antagonistic relationship with Israel and the U.S., and for its pervasive extension of its revolution, manifested through widespread support for Islamic terror organizations. But in order to understand Iran today, it is first necessary to look back at how developments of the 20th century laid the foundation for Khomeini and Islamic fundamentalists to seize power in Iran.

b. Prelude to the Revolution

Iran's political landscape in the early 20th Century can be viewed as a broad struggle between nationalistic tendencies and autocratic rule and was greatly influenced by the exploitation of colonial powers. At the end of the previous century, Persia, as it was called then, was at a low point and was "fighting off the unwelcome attention of two

formidable imperial powers, Britain and Russia" (Coughlin 2009). The Qajar Dynasty, who was currently in power, was badly indebted and routinely sold off Iranian interests to support itself. In 1901, the Qajar Dynasty signed over 60 years worth of oil exploration rights to British business man William D'Arcy (Coughlin 2009). This incensed Iranians and contributed to growing nationalism and the Constitutional Revolution of 1905, where Iranians sought a Western style constitution and a limit to the Shah's authority (Farndon 2007). The revolution ultimately failed, but it laid the foundation for a deep-seated sense of nationalism and reflected a growing repugnance to conceding to foreign powers. Furthermore, the Constitutional Revolution was the birthplace of the Iranian parliament, known as the majlis (Farndon 2007).

In 1908, William D'Arcy struck oil in southwest Iran and London bought a controlling stake in the Anglico-Iranian Oil Company (Coughlin 2009). The AIOC came to be a national symbol of "humiliation and exploitation by the British" (Farndon 2007). During this same period—the years preceding World War I—Persian soil became a key strategic asset to the region's major powers. The Russians, Ottomans, and British were each involved in confrontations in Persian territory, with each seeking to advance its sphere of influence for different reasons (Coughlin 2009). This had a devastating effect on the Iranian economy and its people and the government became so weak that some Sheiks were able carve out semi-sovereign states within Persia's boundaries (Coughlin 2009). The weakness of the Qajar Dynasty and continued exploitation by foreign powers combined to pave the way for the rise of Reza Khan and the Pahlavi Dynasty. Reza Khan was an "accomplished military officer and British protégé" in command of the elite Cossacks Brigade (Coughlin 2009). Khan used his military position to build a strong political base and to reign in rogue Sheikdoms and, by 1923, had gained enough power to rival the Shah (Coughlin 2009). The Persian people, including the Mullahs, clamored for leadership that could hold the nation together and who seemed strong enough to represent its interests. It believed it had found it in Reza Khan and, as a result, the Majlis and the mullahs combined to force the Qajar Dynasty into exile and installed Shah Reza Khan, thus beginning the history of the Pahlavi Dynasty who would remain in power until 1979 (Farndon 2007).

Reza Khan embarked on an aggressive campaign of secular modernization seeking to emulate Turkey's success. Among other reforms, Khan replaced Shari'a Law with

Western judicial concepts, made education compulsory for boys and girls, and outlawed the chador (Farndon 2007). The once-influential Shi'a clergy of Iran was reduced to almost nothing (Coughlin 2009). Even the renaming of the state from Persia to Iran was a sleight to Islam, as it was part of a broader effort to re-emphasize Persian culture over Islam (Farndon 2007). These pressures on the clergy boiled over in 1936 when demonstrations erupted at the Imam Reza Mosque in Mashdad "to protest Khan's attacks on Shi'ism," but Khan put the clergy in its place by brutally suppressing the protestors, killing between 100 and 400 (Farndon 2007). Khan's iron-fisted rule alienated the clergy (and others), but it was his relationship with Nazi Germany ahead of World War II that proved his demise. Khan "admired Hitler's autocratic style and ultra-nationalism" so he fostered close ties to the German dictatorship (Coughlin 2009). However, the Allied powers of Britain and Russia saw Iran as its 'Bridge to Victory' and intended to use Iran to ship arms and supplies to support the Red Army (Coughlin 2009). Russia and Britain invaded Iran and forced Khan's abdication, leaving the throne to Khan's 22 year-old son, Muhammad Reza (Coughlin 2009).

c. Iran: Road to Revolution—the 1953 Coup

Inheriting a war-torn country with a decimated economy, the young Shah assumed leadership in a miserably weak position. Both the clergy and nationalists were hungry to reassert influence after decades of oppressive rule. When the clergy reemerged, it had become divided between the traditional quietists and a newly-emerging group, led by Ayatollah Abolqassem Kashani, who believed the imposition of Shari'a law should be actively pursued, even if that meant involvement in politics (Coughlin 2009). The young Shah was in no position to reign in the clergy and conceded almost all of his father's restrictions, marking the beginning of a trend toward Shi'a political involvement (Coughlin 2009).

The nationalist resurgence was made possible by Reza Khan's removal and was fuelled almost entirely by opposition to British exploitation of Iranian oil resources (Farndon 2007). By 1950, "Iranian oil was the prime energy source for much of the Western world," but Iran saw little profit from it (Farndon 2007). In 1950, Iran received $45 million in oil revenue while Britain profited handsomely, raking in $142 million (Farndon 2007). Mohammed Mosaddeq emerged as the leader of the nationalist movement, deriving his

influence from his public opposition to the Shah's weakness in the face of Britain and for leading pressure on the AIOC to negotiate a better deal (Farndon 2007). Mosaddeq managed to put together a coalition—the National Front—with broad popular support that included both the clergy and Bazaari (merchant class) (Farndon 2007). The clergy, normally fearful of the secular leanings of the nationalists, were united by hatred for the influence of outsiders. Mosaddeq tried in vain to negotiate a fairer deal with Britain, but Britain refused to make even slight concessions. Therefore, on 15 March 1951, Mosaddeq introduced, and the majlis approved, a measure to seize Iran's oil rights and it was met with unanimous approval (Coughlin 2009). With this daring political move, Mosaddeq at once attained the prime minister-ship, won status as an Iranian nationalist hero, and changed the course of Iran's history. Mosaddeq's support base grew so quickly that Mosaddeq became the de facto leader of Iran, eclipsing Muhammed Reza Shah (Farndon 2007).

The oil takeover provoked the biggest international crisis in Iran's short history as a nation (Coughlin 2009). Britain saw this as a hostile action, tantamount to a war declaration and, accordingly, drew up war plans and imposed an oil embargo to force Mosaddeq's compliance (Coughlin 2009). Britain attempted to persuade the U.S. to take a tough stand against Iran and Mosaddeq. With Cold War politics as justification, and despite Iranians near-universal support for Mosaddeq, Washington decided to throw its support behind Britain and the Shah. After Mosaddeq's refusal of a 50–50 deal, British intelligence services and the CIA colluded with the Shi'a clerics to incite an Iranian coup—codenamed Operation Ajax—aimed at replacing Mosaddeq with an American-backed general and then reseating the Shah firmly in power (Coughlin 2009). British and American covert efforts were successful in eroding Mosaddeq's support base and, on 19 August 1953, Mosaddeq was forced to flee and was later arrested (Farndon 2007).

d. The Shah's White Revolution

Iranian nationalists, long weary of foreign influence, saw the 1953 coup as one more poignant example of Iran's exploitation at the hands of foreign colonialists. That Mosaddeq was seen as a national hero for standing up to Britain ensured this event was branded in the mind of Iranians. The Shah, upon his return, knew he lacked broad support and was compelled, at least in his mind, to rule by brutal repression (Farndon 2007). The

U.S. was crucial in propping up the Shah's regime, both financially and politically, which fanned resentment among the nationalists, whose support Mosaddeq most enjoyed. Americans would quickly forget this coup, but it came to be a galvanizing revolutionary message that would be propagated in the years leading up to Khomeini's Revolution and beyond (Farndon 2007).

After the 1953 coup, the Shah became a key White House ally central to the U.S. effort to contain Russia (Coughlin 2009). The Shah, and his American backers, began to strengthen both internal security services and the Iranian military. The Americans setup a "highly effective intelligence operation which, in 1957, became SAVAK" (Coughlin 2009). The U.S. also helped the Shah to increase its armed forces from 120,000 to 200,000 from 1953-1961 (Coughlin 2009). When the Kennedy administration arrived in 1961, human rights became central to U.S. foreign policy and the Shah was obliged to fall in line (Coughlin 2009). The Shah instituted a series of liberal, populist reforms that came to be known as the White Revolution, or the 'Revolution of the Shah and the People' (Coughlin 2009). The White Revolution was essentially another push at modernity that conformed more to Westernized, secular social policy.

A central plank of the Shah's White Revolution, and the one that would prove most disastrous, was the land reform program. The land reform program was designed to confiscate land from wealthy landowners and redistribute it to the peasant class. While seemingly laudable, these land reforms had disastrous effects. In a single stroke, the Shah succeeded in alienating two powerful constituencies: the clergy, who relied on land wealth to fund theological education and institutions, and the Bazaari, whose business success obviously relied on land wealth (Farndon 2007). The land reform program also brought back National Front sympathies, as the wealthy class became disenfranchised by the Shah's policies (Coughlin 2009).

This time period coincided—not by accident—with the rise to prominence of Ayatollah Ruhollah Khomeini. Khomeini, inspired by Ayatollah Kashani's political activism, began to become a vocal opponent of the Shah's reform programs, taking direct issue with the liberal policies that allowed women to vote, did not enforce the Chador, and, in short, did not conform to his vision of Shari'a Law (Coughlin 2009). Khomeini, prior to this time, while a respected scholar, had been viewed by the mainstream clergy as eccentric and

had been excluded from the inner circle (Coughlin 2009). Khomeini, however, seized upon the Shah's policies and aligned himself with the National Front, preaching populist messages that attacked the Shah. Throughout the early 1960s, Khomeini spoke and wrote strongly in opposition to the Shah. The Shah reacted by using his police force to suppress Khomeini supporters and by conscripting Khomeini loyalists into the Shah's army (Coughlin 2009).

On 3 June 1963, Khomeini used the occasion of Ashura to give the Shah a particularly strong condemnation, and the Shah responded by arresting Khomeini on 5 June (Coughlin 2009). The Shah's police became embroiled with demonstrators and ended up killing 28 at the police station where Khomeini was being held, and 200 more demonstrators were killed nation-wide (Coughlin 2009). Khomeini was released from prison in early July and placed under 24-hour surveillance by SAVAK. Khomeini, however, emerged stronger from his confrontation with the Shah, with many Iranians drawing inspiration from his "steadfast refusal to cow to the Shah's intimidatory tactics" (Coughlin 2009). Khomeini continued to berate the Shah and repeatedly called for him to be overthrown. Khomeini seized upon the Shah's relationship to the U.S. and Israel and successfully positioned the U.S. as the new "common enemy" of Iran, unseating the previously held bogeymen of Britain and Russia (Coughlin 2009). The power struggle between the Shah and Khomeini boiled over when the Shah directed the majlis to pass a law granting diplomatic immunity to all American personnel and their dependents (Coughlin 2009). Khomeini delivered a powerful speech where he capitalized on Iranian sensitivities to foreigners by telling the people the Shah has subverted Iranians to being "lower than American dogs" because Americans are liable for killing their neighbor's dogs (Coughlin 2009). The Shah had had enough. Khomeini was arrested and exiled to Turkey on 4 November 1963.

e. Khomeini in Exile

Khomeini would remain in Turkey until the summer of 1965. During his time there, he maintained his links inside Iran and developed formidable alliances with

militant Islamic groups. Of these, the most notable was a group called Hezbollah[12]. Hezbollah began a campaign of terror against supporters of the Shah (Coughlin 2009). Khomeini, who was already a fairly wealthy landowner, became a millionaire while in Turkey owing to widespread support for his campaign against the loathed Shah (Coughlin 2009). His confrontation with the Shah and subsequent exile raised Khomeini's status and made him a symbol of the opposition. Meanwhile, the Shah was conducting a ruthless campaign against Khomeini supporters in Iran—to seemingly great success—and, by the summer of 1965, he was no longer considered a viable threat and was authorized to move to Najaf, Iraq (Coughlin 2009).

It was from Najaf—tomb of Imam Ali, the first Iman and the Shi'a founder—where Khomeini would fully develop his vision for an Islamic Republic. It was also in Najaf where he would forge crucial alliances with Shi'a leaders in Iraq and Lebanon (Coughlin 2009). The Iraqi Shi'a, having experienced a history of political turmoil, were disinclined to get involved in the Iranian politics (Coughlin 2009). Therefore, Khomeini focused his efforts on resisting the Shah with populist reform messages. Though the mainstream Iraqi Shi'a remained aloof to Khomeini, he managed to build strong relations with more radical Iraqi mullahs. His most important relationship was with Mohammed Baqr al-Sadr, a powerful cleric who was head of the Da'wa (the Call) Islamic party and the father of Muqtada al-Sadr, who would come to lead Shi'a resistance to U.S. occupation in 2003 (Coughlin 2009). Baqr al-Sadr, like Khomeini, believed in clergy involvement in politics and believed that militancy was justified in achieving political objectives. They based these beliefs on a conservative interpretation of Shari'a law. Baqr al-Sadr and Khomeini would remain close allies and friends until Saddam Hussein had Sadr assassinated in 1980 for supporting a Shi'a revolt against the Baath regime (Coughlin 2009).

Throughout the 1960s, Khomeini laid out his true vision for the Islamicization of the Muslim world. Encouraged, or perhaps emboldened by, Baqr al-Sadr, Khomeini commenced on a series of impassioned lectures captured in a thin volume titled

[12] Hezbollah developed as a coalition of radical Islamists in the 1960s. This group 'believed in assassination and armed resistance in the name of Islam'. The group was set up with the Khomeini's aid and became a loyal tool that aided Khomeini in fomenting and successfully executing his revolution. According to Coughlin, this Hezbollah was the prototype for the Iranian Revolutionary Guards and the famous Lebanese Hezbollah, both of which arose during the 1980s (Coughlin 112–113).

Velayet-e Faqih, or 'regency of the theologian' (Farndon 2007). Traditionally, Shi'a doctrine viewed any form of government as profane and inherently fallible and, therefore, believed that clergy "shouldn't stoop to politics" (Farndon 2007). Khomeini's Velayet-e Faqih[13], however, laid out a quite different and very powerful vision that drove the ideology of the revolution and its legacy, arguably, still to this day. According to Khomeini, any form of government that is not based on Shari'a law is illegitimate and illegal under Islam (Coughlin 2009). Accordingly, it is the duty of the jurist, or Faqih, to rule as the sole source of authority as the Supreme Leader, and government structures formed by man should be subservient to this jurist (Farndon 2007). Con Coughlin summarizes the implications of Khomeini's vision in the Velayet-e Faqih (2009):

> Senior clerics who specialized in Islamic Law (feqh) – of which Khomeini was one – had the ultimate authority to rule the state, rather than giving their blessing to the appointment of a secular ruler such as the Shah.

But Khomeini, politically shrewd as he was, was sensitive to the inflammatory nature this message might have on the populist-minded masses and ensured it remained only in "seminaries and theological writing" (Coughlin 2009). The Velayet-e Faqih was used to galvanize hard-line support from radicals, but his message to Iranians and moderates in Iraq remained one of populism and plurality, and one squarely focused on the Shah's illegitimacy, his political and economic policies, and his relationship to the U.S. and Israel (Coughlin 2009).

f. The Shah's Last Steps

The Shah's 'White Revolution' began to subside after Kennedy's assassination in 1963. Due in part to an assassination attempt on the Shah in 1965 and the murder of his Prime Minister, the Shah's regime from 1965 until its end in 1979 came to be as brutal and repressive as any that had come before (Coughlin 2009). This period saw an ever-increasing disenfranchisement between the Shah and the people of Iran. The oil boom of the 1970s, following the Yom Kippur War, contributed to extravagance and largess on the part of the Shah's regime (Coughlin 2009). Additionally, the rise of Israel as the region's

13 Faqih is an Islamic jurist, such as Ali when he was Caliph. Ali was the only Faqih in history, until Khomeini achieved this title (Coughlin).

superpower after its stunning success in Israeli-Arab Wars of 1967–1973 contributed to the Shah becoming closer with the U.S. and Israel for arms and security (Coughlin 2009). Together, these events served to drive a deeper wedge between the Shah and his people, with Iranians again feeling that the Shah was selling Iran's interests to foreign powers. The Shah made matters worse by his seemingly disillusioned actions as symbolized by the extravagant 2500th Year celebration of the Persian Empire the Shah arranged in October 1971 (Coughlin 2009). The Shah spent $100m on an elaborate event that Iranians perceived as aimed at impressing the outside world. This perception was exacerbated, and made more insulting, by the fact that much of the lucrative work was done by foreign contractors, a great number of which came from America (Coughlin 2009).

The Shah—and his U.S. supporters—would continue to misstep during the 1970s. Aiming to maintain close ties to the U.S., the Shah anticipated pressure to reform his human rights record from the newly-arrived Carter administration. He directed SAVAK to ease pressure against dissent, which had the effect of allowing anti-government sentiment to spill out into the open (Coughlin 2009). The Shah, as Coughlin put it, was "stuck between a rock and a hard place" (2009). On one hand, he sought to placate Washington on human rights, but, on the other hand, by not suppressing the violence he was almost conceding the throne (Coughlin 2009). To make matters worse, the Carter administration provided little guidance. Carter's administration showed a fundamental lack of understanding of the situation by clumsily propping up the Shah with praise for his human rights efforts while Iranians suffered (Coughlin 2009). The U.S. did not seem to sense the distance that had grown between the Shah and his people.

Through the summer and fall of 1978, a series of unfortunate events occurred that would "finally close off any possibility of a compromise between the government and opposition" (Coughlin 2009). The first was when the Ettela'at, a government controlled newspaper, printed a defaming article accusing Khomeini of being a homosexual (Farndon 2007). Rioting in Qom broke out immediately and 20 protestors were killed, including several mullahs (Coughlin 2009). This event made Khomeini, as the only active denouncer of the Shah, the official symbol of the brewing revolution (Coughlin 2009). Massive demonstrations erupted across Iran resulting in running street battles in Tehran, Qom, and Tabriz (Farndon 2007). In August, SAVAK reportedly chased militants into a cinema in

Abadan and set it on fire, killing 400 inside, including women and children (Farndon 2007). In September, the Shah declared martial law and, on 8 September—which would come to be known as Black Friday—hundreds of pro-Khomeini demonstrators were gunned down in Jaleh square in southeast Tehran (Coughlin 2009). This marked the end of the Shah's bid to maintain control. On 16 January 1979, Reza Shah packed his bags and left the country (Farndon 2007). On 1 February, Khomeini stepped off his Air France flight as the clear front-runner to lead the revolution. For the moment, Iranians celebrated his arrival (Farndon 2007).

g. Khomeini's Power Grab

Khomeini may have been the front-runner to lead the revolution, but he was not anointed as Iran's ruler right away. From the chaos and disorder arose hundreds of komitehs—or committees—with ideologies ranging from leftist, communist interpretations of Islam to the fundamental Shari'a interpretation of Khomeini to the National Front (Coughlin 2009). Recognizing this, Khomeini sought early on to appeal to these groups to ensure his leadership position. His first move was to appoint a nationalist prime minister, Mehdi Bazargan—a nationalist leader who was keen to the rule of law and respect for human rights (Coughlin 2009).

To begin administering the new Republic, Khomeini established a 'Revolutionary Council', composed of thoroughly vetted religious revolutionary loyalists, whose identity would not be disclosed. The Revolutionary Council served as Khomeini's key governing body whose function was to supervise Bazargan's government (Coughlin 2009). The Revolutionary Council was to vet candidates, lead the writing of the new constitution (to ensure it adhered to Khomeini's principles), and was tasked with developing a militant force capable of protecting the revolution—the precursor to the Revolutionary Guards (Coughlin 2009).

From the beginning, Khomeini and Mehdi Bazargan struggled on Iran's new direction. Bazargan sought a more pluralistic, secular constitution that respected human rights and the rule of law and wanted normalized relations with the West (Coughlin 2009). Bazargan, while opposed by Khomeini, managed to win some

concessions, such as voting rights for all adults—including women—to elect the "president, the majlis, and local provincial councils" (Coughlin 2009). However, Khomeini's Revolutionary Council ensured the principals of Velayet-e Faqih made it into the constitution and that the powers of the Supreme Leader were virtually limitless (Coughlin 2009). Bazargan enjoyed a broad base of support from Iranian nationalists and some prominent figures of the moderate Shi'a clergy who did not share Khomeini's fundamentalist vision. Nevertheless, it was not enough to stand up against Khomeini loyalists who repeatedly undermined Bazargan's influence, many of whom successfully tied Bazargan to the 'Great Satan', for his pragmatic desire to normalize relations with the West (Coughlin 2009). Bazargan tendered his resignation two days after demonstrations broke out in Tehran protesting Bazargan's role as a negotiator in the U.S. hostage crisis (Coughlin 2009).

The U.S. Embassy hostage crisis broke out spontaneously on 4 November 1979 when a group of 400–500 students calling themselves 'student followers of the Imam's line' (Coughlin 2009) seized the U.S. embassy in response to Washington's acceptance of Shah Muhammed Pahlavi into the U.S. for cancer treatment (stfrancis.edu). Many Iranians began to smell a coup of the sort that had occurred in 1953, which still burned in the minds of many Iranians (Farndon 2007). This crisis became a defining moment for Iran's revolution as Khomeini seized the opportunity to strengthen his grip as the revolution's undisputed leader (Coughlin 2009). United against a common enemy, the political infighting and growing opposition to Khomeini's Velayet-e Faqih would be set aside "to take a stand against the 'Great Satan'" (Coughlin 2009). Khomeini placed a loyalist to supervise the student hostage-takers, giving him ownership of the standoff with the U.S. and along with it the opportunity to simultaneously humiliate the U.S. and demonstrate that he was the leader of Iran's revolution (Coughlin 2009).

h. Iran at War: The Iran-Iraq War and Iranian Civil War

Iran was beset by two wars in the early 1980s, a civil war and an "imposed" war with its neighbor to the west, Iraq. The 1980 elections—Iran's first—resulted in a moderate President, Abol Hassan Bani-Sadr. Bani-Sadr was an ally of

Khomeini's during his exile, and was a moderate Islamist who was formerly part of the National Front (Coughlin 2009). Though an ally of Khomeini's, Bani-Sadr actively spoke out against the Velayet-e Faqih, and so Khomeini hesitantly endorsed Iran's first democratically elected president (Coughlin 2009). At the same time, the Revolutionary Council's heavy hands in the 1980 elections ensured the majlis was dominated by the clergy, under the newly formed banner of the Islamic Revolutionary Party (IRP), of which Khomeini was a chief supporter (Coughlin 2009). It wasn't apparent yet, but the election of a nationalist leader and a clergy-dominated majlis, the 1980 elections had paved the way for civil war.

During this same year, Iran's neighbor brought upon Iran what Iranians came to call the "Imposed" war (Farndon 2007). Saddam Hussein executed his own coup in July, 1979. This was at least partially out of concern for a Shi'a uprising threatening the Baath regime that seemed to be emanating from Iran (Coughlin 2009). Hussein and Khomeini were long-time enemies. Khomeini saw Hussein as an infidel—and often said so—and Hussein had happily expelled Khomeini, at the Shah's request, from Najaf in 1977 (Coughlin 2009). Hussein had observed the power Khomeini exerted over the Shi'a (60% of Iraq's population) before the revolution, and especially after it. Coughlin describes Saddam's decision to invade as "calculated opportunism" (2009). He reasoned that with the turmoil and in-fighting present in Iran, resistance would be virtually non-existent. Hussein's main impetus for action was to head off an extension of Khomeini's revolution, but he also wanted to settle an old score. The humiliating Algiers agreement of 1975 had conceded Iraq's only access to the gulf, vis-à-vis the Shatt al-Arab waterway. Hussein intended to reclaim it. He also intended to occupy parts of the oil-rich portions of the Khuzestan province in southwest Iran (Coughlin 2009).

Meanwhile, Khomeini and the revolution were vulnerable, suffering from deep internal divisions. His fledgling republic teetered on the brink of civil war and the army, largely equipped with American weaponry from the Shah's era, sorely lacked repair parts—the hostage crisis had ended all trade with the U.S.—and was in no condition for a fight. But Khomeini, the opportunist he was, by the end of 1981, had used Iraq's invasion to purge his political opponents and rally the nation behind a

common enemy. Khomeini initially tried to broker peace between Bani-Sadr and IRP, who became embroiled in intense political infighting over how the war should be waged. Bani-Sadr was responsible for employing the Iranian National Army and the Revolutionary Guards, but the IRP jostled for power over control of the IRGC. With the country descending into civil war, Khomeini, in May 1981, broke with Bani-Sadr and pushed the IRP-dominated majlis to oust him on grounds of "incompetence" (Coughlin 2009). Bani-Sadr, who by now was closely aligned with the leftist Mujahideen-e Khalk-e-Iran[14] and various other nationalist groups, continued resistance after his removal from the presidency (Coughlin 2009). Nevertheless, the Mujahideen were outmatched by the Revolutionary Guards, whose skills had been honed by combat action against Iraq. The Revolutionary Guards conducted a nation-wide purge of the Mujahideen and Bani-Sadr supporters (Coughlin 2009). By the end of 1981, 2,500 Mujahideen had been executed and Bani-Sadr was exiled to Paris (Coughlin 2009). Ali Khameini, a long-time Khomeini loyalist was appointed to replace Bani-Sadr, effectively sealing Khomeini's triumph over moderate, secular opposition. The internal pressures faded and Khomeini was free to focus on Hussein and Iraq. The clergy were, at last, explicitly in control of the Iranian Republic (Coughlin 2009).

The Iran–Iraq War would end officially on 20 July 1988 with a UN-brokered cease fire agreement drawn up in Geneva. The war, however, had a profound impact on Iran militarily, politically, and economically. It also had a profound impact on Khomeini. In May 1982, Iranian forces broke Iraq's initial siege on Khorramshahr (Coughlin 2009). With the Iraqi army on their heels, it appeared as if Iran was positioned to end the war favorably, and Khomeini was inclined to do so. However, his new president, Ali Khameini, and much of the mullah-dominated majlis, saw an opportunity to achieve the grander vision by pressing the attack forward making "Khomeini the ruler of Iraq and all of the Muslim world" (Coughlin 2009). Hesitant at first, Khomeini was

[14] Mujahideen-e Khalk-e-Iran, or Holy Warriors of the Iranian People, was formed in secrecy in the 1960s and "were composed of young Iranians previously associated with the religious wing of the National Front" blending nationalism, Islam, and inspired by Marxist revolutionaries (Coughlin 134). Khomeini was supportive of the group as a matter of convenience. While exiled, Khomeini funneled money to the group to resist the Shah and, then after grabbing power, sought to expunge the group since its ideology no longer aided the revolution (Coughlin 199).

persuaded and, once he was, he applied his usual fanaticism to the task calling for nothing short of the unequivocal removal of Saddam Hussein (Coughlin 2009). Khomeini began to present himself as the international leader of the Islamic Revolution and began publicly assuming the mantle of oppressed Muslims saying, 'our aim is to rid Iraq of its tyrannical leaders and liberate Jerusalem' (Coughlin 2009).

Nevertheless, Iran's momentum quickly ground to a halt as the war came to resemble World War I trench warfare. The stalemate was broken when the U.S. openly entered on Iraq's side (Coughlin 2009). The U.S., fearing Iraq may come under Khomeini's control, directly supported Iraq's war effort with real-time intelligence, improved equipment and armament, and assertive Navy action in the gulf (Coughlin 2009). By 1988, Iraq was back on the offensive. They began launching SCUD missiles into Tehran and Qom, and the U.S. Navy began destroying oil platforms (Coughlin 2009). Reluctantly, and at the strong insistence of his advisors, Khomeini was forced to unconditionally accept a humiliating cease-fire arrangement, UN Resolution 598 (Coughlin 2009).

In the course of this eight year war, Iran had lost around three-quarters of a million lives (Farndon 2007) and its economy had been brought almost to its knees, with inflation running at 40–50% and unemployment over 30% (Coughlin 2009). Khomeini, humiliated, came under fire for passing up an opportunity to end the war in a position of strength, and the war took a toll on him physically and psychologically. Khomeini never appeared in public after the war ended (Coughlin 2009). Though the war devastated Iran, it ended up galvanizing support for his revolution. As mentioned, this war provided Khomeini and revolutionary leaders the opportunity to expunge all moderate opposition and consolidate its hold on power at a time when it needed a common enemy. Additionally, it provided additional strain on those who sought to normalize relations with the West, since it was U.S. support that ultimately doomed Iran to defeat. Khomeini's health failed him toward the end of the war, but with determination fueled by the humiliation of the Iran-Iraq War, Khomeini ensured all the pieces were in place to guarantee the survival of his revolutionary vision (Coughlin 2009). Khomeini died on 3 June 1989.

i. *After Khomeini (1990s)*

Supreme Leader Ali Khameini, unlike his predecessor, had not achieved the religious stature that the constitution required of a Supreme Leader, at least as envisioned by Khomeini. However, in Khomeini's final months, recognizing his health was failing, he wanted to ensure his legacy would continue, and believed his ally Ali Khameini was best suited to carry on his legacy. Khomeini convened the 'Assembly of Experts'[15] to revise the constitution to enable Khameini's succession and ensure he enjoyed the same broad powers Khomeini had enjoyed (Coughlin 2009). As president, Ali Khameini had proven to be pragmatic, but his lack of theological credentials created in him an insecurity that led him to align with Khomeini's loyal hard-liners to prove his merits (Coughlin 2009). His first act as Supreme Leader was to strengthen the Revolutionary Guards, establishing two new divisions: The Quds (Jerusalem) Force and the Basij[16] (Coughlin 2009). His next act was to abolish the Prime Minister post and transfer all powers to the president, who was another Khomeini loyalist, Hashemi Rafsanjani (Coughlin 2009).

In the 1990s, Khameini continued carrying forward Khomeini's vision by renewing efforts to export the revolution. The newly formed Quds Force, established for this purpose, became active in nearly every regional conflict. In August 1990, when Saddam Hussein invaded Kuwait, the U.S. responded fiercely to dismember Hussein's army. With the Baath regime weakened, a U.S.-supported Shi'a uprising developed in southern Iraq aimed at overthrowing Hussein and the Baathist rulers. The Quds force leaped into action establishing links with Shi'a militants and training the Badr Corps (Coughlin 2009). The U.S., however, fearing an Iran-influenced Shi'a regime to replace the Baath party, pulled support for the uprising and Hussein brutally suppressed the

15 According to Barbara Slavin, the "Supreme Leader is chosen by the Assembly of Experts, a clerical body that is elected but whose candidates must pass vetting by a group largely appointed by the Supreme Leader" (2008).

16 The Basij Resistance Force is the 'People's' militia (Wehrey et al. 2010), currently estimated between 90,000 and 1 million strong (Wehrey et al. 2010). With broad popular support, the group was formed in the early 1980s to protect Iran from external enemies and internal enemies of the revolution (Wehrey et al. 2010). The Basij was formally merged with the IRGC in 2007 (Wehrey et al. 2010).

opposition (Coughlin 2009). While the U.S. was out, the Quds Force remained, ensuring it maintained close ties to Iraqi Shi'a and continued training the Badr Corps (Coughlin 2009).

Iran and the Quds Force extended influence to other regions as well, especially in the Palestine-Israel conflict. From Iran's perspective, resolving the Palestine-Israel conflict runs counter to its objective of exporting the revolution. Settlement of this issue would legitimize Israel, undermining the revolution's key galvanizing message, and would strain its link with Lebanese Hezbollah, since any peace would have to include Syria (Coughlin 2009). Iran established Hezbollah in the 1980s as a resistance force to Israel and Western colonialists and, through Hezbollah, continues to have a relationship with Lebanon, particularly in the south. Following the Lebanese Civil War in 1991, Iran donated millions through its 'Foundation of the Oppressed'[17] to help the Lebanese in Shi'a dominated areas rebuild their lives (Coughlin 2009). According to Coughlin, southern Lebanon came to look like a "mini-Tehran" after the war, with revolutionary flags flying and posters of Ayatollah Khomeini everywhere (2009). Iran's support of Hezbollah continues to this day with an estimated 80% of Hezbollah's funding ultimately coming from the Iranian Revolutionary Guards, channeled through charities such as the one mentioned above (Coughlin 2009). Iran also became close with Hamas in the 1990s. In December 1992, Israel expelled 400 Palestinian militants to southern Lebanon, most of which were members of Hamas (Coughlin 2009). This inevitably brought the leadership of Hamas and Hezbollah together which, in turn, laid the foundation for a relationship with Tehran. In 1993, Khameini received a delegation of Hamas leadership and pledged an annual contribution of $34 million per year (Coughlin 2009).

i. Iran—Recent History

In 1997, Khameini allowed the moderate candidate Muhammad Khatami to enter the presidential elections, a move mostly designed to placate the political left (Farndon

[17] Foundation of the Oppressed—one of a number of "charity" organizations that Iran uses to funnel money to its benefactors (Coughlin 263).

2007). To everyone's surprise, Khatami won the election with an overwhelming 70% of the vote, fending off a powerful hard-liner propaganda machine and obvious vote rigging (Farndon 2007). This represented an acceleration of a moderate trend already occurring in Iran that owed largely to a stand-off with the U.S. after the Khobar Towers[18] attack in 1996 (Coughlin 2009). Fearing possibility of forced regime change from the U.S., Iran's hard liners had assumed a calm demeanor. Iran's tendency toward moderation, encapsulated by Khatami's presidential election, came to be known as the 'Tehran Spring' (Farndon 2007).

Moderation was short-lived, however, as the conservative hard-liners would fight back. Khameini saw Khatami's liberalization programs as a challenge to the revolution's legacy and, in 1999, sponsored an "assassination campaign" against "dissidents," but mostly aimed at Khatami supporters (Coughlin 2009). In response, Khatami purged the intelligence services, which "resulted in an estimated 80% of them losing their jobs" (Coughlin 2009). But, Khameini halted Khatami's purge resulting in the largest student protests since the revolution, with running street battles between student supporters of Khatami and the clergy-supporting militant group Hezbollah (Coughlin 2009). The student protests wanted Khatami to lead a liberal revolution but Khatami, under pressure from the IRGC, backed down and, as a result, over 1400 students were arrested, effectively ending the campaign for a liberal regime (Coughlin 2009). In 2001, Khatami was again elected, but his position had been so weakened by events of 1999 that he no longer held the authority to bring the change he had promised, and the public faith in him and the reform movement faded. When the 2004 elections came around, the Guardian Council—successor to Khomeini's Revolutionary Council, excluded over 2,000 reformist candidates and extensively rigged the elections. Most Iranians became disenfranchised and refused to participate. As a result, in 2005, the hard-liners once again swept into power, with the election of the ultra-conservative Mahmoud Ahmadinejad (Farndon 2007).

A devoted supporter of Khomeini and long-time IRGC member, Ahmadinejad is a hard-line conservative whose whole professional life was spent supporting

[18] In 1996, elements of Saudi Hezbollah attacked the Khobar Towers complex in Riyadh, killing 19 Americans. The attack nearly brought a military response from the U.S., but was averted by Saudi efforts to negotiate peace (Coughlin 276). At the time, the U.S. suspected Iran was involved. This was confirmed in intelligence estimates released in the wake of the 9/11, where Iran's role in training and financing Saudi Hezbollah was revealed (Coughlin 286-287).

the revolution (Coughlin 2009). The 2005 elections, where he won power, were contested only by Hashemi Rafsanjani, another revolutionary hard-liner. But, Ahmadinejad was Khameini's preferred candidate and the votes were rigged, with some districts reporting more votes for Ahmadinejad than there were people in the district (Coughlin 2009). Ahmadinejad has proven to be an enigmatic character who has managed to capture the world's attention. He is flagrantly "anti-Zionist," openly calling for extermination of the Jewish state. He has been openly belligerent, particularly to the West, by re-igniting and accelerating Iran's nuclear program (more on this in 'Nuclear Iran'). Seeking to rekindle the values of Khomeini's Revolution, in his language, Ahmadinejad uses similar techniques to rally the "poor and dispossessed" against the evils of colonial powers, namely the U.S. and Israel, and even speaks to the Apocalypse, using the return of the Twelfth Imam to galvanize his supporters (Coughlin 2009).

j. Iran and the U.S. Global War on Terror

A series of terror attacks culminating in the 9/11 attacks of 2001 has had profound impacts on both the U.S. and Iran, and the relationship between them. With U.S. sights set squarely on the Taliban in Afghanistan, Washington recognized a need to work with Iran to achieve its objectives there. However, a series of intelligence estimates revealed, in great detail, the level of involvement Iran had had in recent terror attacks, especially its role in the Khobar Tower attacks of 1996 (Coughlin 2009). Among other things, the report showed the relationship between Iran's Revolutionary Guards, Saudi Hezbollah, Lebanese Hezbollah, Hamas, and the PLO (Coughlin 2009). To make matters worse, the Second Intifada erupted in September 2000, which had Khameini calling for the "destruction of Israel" and the U.S. Department of State branding Iran as 'the most active state supporter of terror' and 'the most aggressive nation currently pursuing nuclear weapons' (Coughlin 2009). Iran appeared to the U.S. as a rogue state that was being run by fanatics. Despite all this, however, the U.S. needed Iran's support, and Iran provided both diplomatic and logistic support for the American campaign (Coughlin 2009). The U.S. and Iran seemed to have an opportunity to thaw relations, but things would turn for the worse in 2002.

The Bush administration was considering broadening the Global War on Terror to include Iraq, ostensibly to pursue alleged Al Qaeda networks and remove the threat

of weapons of mass destruction. Bush, in an effort to hint at this without explicitly declaring war on Iraq, included three nations in his famous 'Axis of Evil' speech (BBC 2009). This speech carried as an indictment of Iran as a rogue nation who stood opposite the U.S. in its growing war on terror, and in Iran the speech was "condemned by conservatives and reformers alike" (BBC 2009). According to Coughlin, the 'Axis of Evil' speech "effectively ended any chance of a constructive dialogue between Tehran and Washington" (2009).

Tehran was more than happy to see the end of Saddam Hussein in April 2003, as it accomplished within weeks what Iran could not do for itself in the Iran-Iraq War. But Iran had to move with caution, after all, it had fought a devastating war against Iraq and its relationship with Iraq's Shi'a was not a foregone conclusion (Coughlin 2009). Once Hussein was toppled, the Quds Force immediately deployed into Iraq to ensure "Tehran was fully informed about ongoing political developments" (Coughlin 2009). Once in place, Tehran's forward deployed force supported Iraq's Shia population, both pro-Iran and pro-West factions, and just about any other group that served to resist the U.S. occupation (Coughlin 2009). By 2004, Iran was supporting Muqtada al-Sadr's Mahdi Army, SCIRI[19], Da'wa, the Badr Corps, and al-Zarqawi (a Sunni fundamentalist who the Shi'a hated). As one observant Iraqi Shi'a stated: "It is impossible to oppose Iran because they are paying all the pro-Iran parties, and they are paying all the anti-Iranian parties" (Coughlin 2009). As one Western intelligence official put it, this was "all part of a strategy by Iran's hard-liners to do what they did in Lebanon—drive coalition troops out of Iraq" (Coughlin 2009). Iran, by 2005, had "as many as 30,000 Iraqis on Tehran's payroll" and were paying up to $800 for anyone would carry out attacks against the U.S. or leading Iraqis (Coughlin 2009). Despite Iran's efforts to influence the Iraqi Shi'a and bring them under the revolutionary fold, many have struggled to remain independent of Tehran. According to Barbara Slavin in *Mullahs, Money, and Militias*, "some Iraqi leaders hope to restore Najaf as a center for religious instruction, in part to blunt Iranian influence in Iraq" (2008).

In 2006, war fever was raging in both Washington and Tehran. The U.S. Department of State released a finding that Iran was an 'active' sponsor in "Iraq, Lebanon,

19 Supreme Islamic Council of Iraq (SCIRI) was established by the Hakim family, with help from Iran, in the early 1980s to oppose Saddam Hussein. Iran supports SCIRI, but Iran's support for rival groups has led to the organization distancing itself from Tehran. In 2007, SCIRI rebranded itself as the Supreme Council of Iraq (ISCI), dropping "revolution" (Slavin 2008).

West Bank, and Gaza" and was housing Al Qaeda fugitives from the war in Afghanistan (Coughlin 2009). Complicating matters, Lebanese Hezbollah had just provoked a war with Israel with a carefully planned ambush resulting in the kidnapping of two Israeli soldiers. With Iraq in chaos, the perceived success of Hezbollah against Israel, and the U.S. Iraq Study Group recommending a withdrawal from Iraq, Iran was in its strongest position since Khomeini's Revolution (Coughlin 2009).

Direct military confrontation with Iran was averted, but in 2007 the U.S. revisited its strategy. For its increasingly belligerent nuclear program and its 'proxy war' against the U.S. in Iraq (and, by now, Afghanistan[20]), the U.S. slapped even stronger sanctions on Iran, leading to oil-rationing protests which were brutally suppressed (Coughlin 2009). The U.S. also began a 'surge' strategy in Iraq to gain control over the situation, sending 30,000 more troops. This strategy appears to have been effective in bringing back stability and order, but as General David Patreaus would testify to the U.S. senate in 2008, Iranian-backed militias continued to pose 'the greatest long-term threat to the viability of a democratic Iraq' (Coughlin 2009).

k. Iran: The Islamic Republic—The Nuclear Issue

Iran's nuclear history dates back to the 1950s where, ironically, the U.S. first encouraged the Shah to begin a nuclear program, with the goal of "23 power stations by the year 2000" (Farndon 2007). By 1967, Iran was running its first nuclear reactor at the Tehran Nuclear Research Center (TNRC), supplied by the U.S., and in 1968 signed on to the Nuclear Nonproliferation Treaty (NPT) (Farndon 2007). Iran's nuclear program stalled, however, with the arrival of Ayatollah Khomeini, who saw the Shah's nuclear program as an extension of his relationship with the U.S. (Coughlin 2009). Khomeini changed course in the early 1980s when he saw his enemy, Saddam Hussein, using weapons of mass destruction, urging "his senior officials to revive Iran's nuclear program

20 Iran has historically viewed the Sunni fundamentalist Taliban as enemies. In fact, Iran nearly invaded Afghanistan in 1999 when 11 IRGC were killed after they had come to the aid of Shia Afghans who were being persecuted by the Taliban. However, as Western involvement has grown in Afghanistan and Iraq, Tehran has apparently found common ground with the Taliban. In Spring 2007, NATO commanders found "compelling evidence" that the IRGC was supplying Taliban with "roadside bombs and rockets." (Coughlin)

with a view to developing atomic weapons" (Coughlin 2009). The following section is a timeline, with brief commentary, that traces the development of Iran's nuclear weapons program:

- **1970s**: Nuclear development work placed under the Atomic Energy Agency of Iran (AEOI). Program was subject to regular inspections by the International Atomic Energy Agency (IAEA) "under an agreement the Shah had signed in 1974" (Coughlin 2009).

- **1981**: Regime allocates $800 million to IRGC for "atom bomb program" (Coughlin 2009). While AEOI would be the public face of Iran's nuclear program, the IRGC would control the clandestine component (Coughlin 2009).

- **1983**: IRGC establishes a "special unit devoted to nuclear research" located in Tehran (Coughlin 2009). This was the initiation of the "clandestine" component of Iran's nuclear program (Coughlin 2009).

- **1984**: New nuclear research laboratory built at Isfahan (Coughlin 2009).

- **1985**: Hashemi Rafsanjani "negotiated a deal with China to provide training, expertise, and materials…and Chinese installed the first of four training reactors at Isfahan in 1985" (Coughlin 2009). Other deals were negotiated with North Korea (uranium exploration), the Soviet Union, and Pakistan (Coughlin 2009). Iran conducted experiments in uranium conversion and fuel production and acquired a blueprint for a centrifuge (Coughlin 2009).

- **1987**: Iran succeeded in negotiating deal with Pakistani nuclear scientist Dr. Abdul Qadeer Khan who later provided blueprints for design of P2 centrifuges, which can be used to enrich weapons grade uranium (Coughlin 2009).

- **1990**: Iran completes deal with Russia to supply reactors for Bushehr (Farndon 2007).

- **1991**: Iran completes deal with China "to supply converters to make uranium hexafluoride—the precursor for uranium fuel" (Farndon 178-179).

- **2002**: The National Council of Resistance of Iran (NCRI) disclosed that Iran had constructed a gas centrifuge plant at Natanz, which could be used to enrich uranium, and a heavy-water production facility at Arak, which could be used to extract plutonium (Coughlin 2009).

- **2002**: Russians begin construction of first nuclear reactor at Bushehr despite strong objections from the U.S. (BBC 2009).

- **2003**: UN inspectors confirmed what the NCRI had disclosed in 2002 and learned that the reactors had been in development since the mid-1980s (Farndon 2007). In May, IAEA became aware of a nuclear research center in Lavizan and requested authorization to inspect it, but Iran ordered the entire site to be demolished (Coughlin 2009).

- **2004**: IAEA inspectors finally able to inspect Lavizan, but entire site had been turned to wasteland, including the removal of all trees from the surrounding park land (Coughlin 2009). Iran rebuked by IAEA for failure to fully cooperate with inquiry (BBC 2009).

- **2005**: Iran says it has resumed uranium enrichment at its Natanz facility and insists it is for peaceful purposes. The IAEA finds Iran in violation of the NPT (BBC 2009).

- **2006**: January – Ahmadinejad orders Iran's nuclear scientists to remove IAEA's seals at Natanz to enable them to resume work on assembling centrifuges needed for uranium enrichment (Coughlin 2009).

- **2006**: February – IAEA votes to report Iran's activities to the UN Security Council (BBC 2009).

- **2006**: April – Ahmadinejad proclaims on Iranian TV that Iran had joined the 'nuclear club' and will 'continue on our path until we achieve production of industrial-scale uranium' (Coughlin 2009). Iran had announced that it had successfully enriched small amounts of uranium (BBC 2009), which the IAEA confirmed (Coughlin 2009).

- **2006**: August – UN Security Council deadline for Iran to halt nuclear activity passes (31 August). IAEA confirms that Tehran failed to suspend the program (BBC 2009).

- **2006**: December – UN Security Council passes UN Resolution 1737 imposing trade sanctions on Iran (BBC 2009). The sanctions were relatively mild but served as a "shot across the bow." The measures included: (1) ban on sale of any material that could be used for its nuclear or missile program; (2) travel restrictions on 12 Iranians thought to be connected to the program; and (3) asset freeze of companies and banks believed to be involved in the nuclear and missile programs (Coughlin 2009). Iran condemns the resolution and vows to accelerate its program (BBC 2009).

- **2007**: February – IAEA says Iran failed to meet a deadline to cease uranium enrichment, opening it to the possibility of new sanctions (BBC 2009).

- **2007**: April – Ahmadinejad claims Iran enriching uranium on an 'industrial scale' (BBC 2009). This is a watershed moment in Iran's nuclear history. At this point, according to Con Coughlin, Iran had "mastery of the nuclear fuel

cycle" (2009). It could now mine uranium from its indigenous mines, convert it to UF_6 at Isfahan, and then enrich the UF_6 at Natanz "for either commercial or military use" (Coughlin 2009).

- **2007**: May – IAEA says Iran could develop a nuclear weapon in 3 to 8 years if it so chooses (BBC 2009).

- **2007**: September – Israel bombs a secret nuclear installation in Syria. Israelis suspected that Iran had encouraged Syria to embark upon its own nuclear program in the event Israel attacked Iran's nuclear facilities (Coughlin 2009). Earlier in the year, Ehud Olmert "ordered his military chiefs to ensure Israel had the capability to carry out unilateral air strikes against Iran's nuclear facilities if the need arose" (Coughlin 2009).

- **2007**: October – U.S. announces sweeping new sanctions against Iran. This represents the toughest stance since it first imposed sanctions over 30 years ago (BBC 2009). Washington imposed sanctions on Bank Melli, Bank Mellat and Bank Saderat and branded the Revolutionary Guards a proliferator of weapons of mass destruction (Reuters 2009).

- **2008**: July – Iran test fires a new version of the Shahab-3 long-range missile that Iran claims is capable of hitting targets inside Israel (BBC 2009).

- **2008**: September – UN Security Council unanimously votes to reaffirm demands that Iran stop enriching uranium. However, no new sanctions were imposed since Russia said it would not support them (BBC 2009).

- **2009**: October – Five permanent UN Security Council members plus Germany offer proposal to enrich uranium abroad. Iran rejects offer (BBC 2009).

- **2009**: November – IAEA passes resolution condemning Iran's establishment of another secret enrichment site (Qom). Iran, in defiance, announces its plans to create 10 more uranium enrichment sites, 5 to begin immediately and 5 to begin within the next two years (Leyne 2009).

- **2009**: December – Iran claims successful test launch of Sajiil-2 missile with range of 2000 km that "could reach targets in Israel and U.S. bases in the gulf" according to a report on state-run TV. The U.S. dismisses that this test adds any capability to Iran's arsenal (CNN 2009).

3. Brief History of Lebanon

a. Introduction

Lebanon has come to symbolize the joust for regional power and influence in the Middle East and its history reveals the aspirations and power struggles among the

region's stakeholders. Lebanon's Civil War has had enduring impacts on the region and its consequences and aftermath still shape the region today. Lebanon's history tells many stories: Iran's projection of its revolution and statist ambitions, Syria's quest for influence and suzerainty over Lebanon, and the Palestinian struggle for a homeland. From the perspective of the U.S. and Israel, Lebanon is a breeding ground for conflict and a springboard for provocation toward "Zionists" and "elite" Western colonialists.

b. Lebanon's Civil War (1975–1990)

The attempted assassination of Pierre Gemayal, founder of the Phalangist Party, is considered the official spark that ignited the Lebanese Civil War, but the seeds were sown decades earlier when the French carved out a "generous chunk of Syria" and established 'Greater Lebanon' (Norton 2007). The 1943 National Pact that granted Lebanese independence from colonial France established a confessional[21] political system to represent 17 official confessions (Norton 2007). By this pact, Maronite Christians received the privileged position, carrying a 6 to 5 edge in parliament, and the presidency. The Prime Minister would be Sunni, the second most powerful stake, and the Shi'a were awarded Speaker of the Chamber of Deputies, the least favorable position among the three major blocs (BBC 2009).

A confluence of social factors would highlight the weakness of the 1943 Lebanese compromise. First, birth rates of the Shi'a outpaced those of the Sunni, whose birth rates outpaced those of the Maronite Christians (Norton 2007). Shifting demographics and an inflexible political system explain a significant portion of Lebanon's plight. The second important social occurrence involved the Palestinians. The 1948 War and the Jordanian Civil War of 1970–71 forced massive migration of Palestinian refugees, along with the PLO, into Lebanon (Norton 2007). The Palestinian migration pushed Shi'a farmers from the countryside into Beirut. This placed an even heavier burden on an already weak government and threw the population even further out

[21] A confessional political system, or confessional democracy, is one in that assures each religious sect a share in parliamentary, government, and civil services which is proportionate to that groups numerical strength in the country's population (Suleiman 1967).

of balance with the confessional structure. The PLO proved to be particularly troublesome, challenging the government and establishing a "state within a state in Beirut and South Lebanon" (Norton 2007).

The early years of the war (1975–1982) were characterized by internecine violence, terror, and relentless patterns of attack and retaliate. The Lebanese Army quickly deteriorated into factional militias and the Lebanese government, without an army to wield, was powerless. The primary parties to the Civil War were the Lebanese Front (LF), a confederation of Maronite militias and their sympathizers representing the current government, and the opposition Lebanese Nationalist Movement, a loose confederation of Palestinian guerrillas and militant factions seeking new political order (U.S. Dept of State 2009). The first attempt at peace, the Riyadh conference in 1976, introduced Syria as a central player in Lebanon with establishment of the Arab Deterrent Force (ADF). Ostensibly, this was a joint Arab peacekeeping force. However, Syria provided 27,000 of the 30,000 troops in the ADF (U.S. Dept of State 2009). Syria remained as an occupation force until 2005, and still plays a central role in Lebanese politics through Hezbollah.

Israel first occupied Lebanon in 1978 with the Litani Operation to push Palestinian guerrillas north of the Litani River. UN Resolution 425 called for Israel's unconditional withdrawal from the 9-mile security zone in southern Lebanon (Migdalovitz 2005). Israel would invade Lebanon again on June 6, 1982, in response to a suspected assassination attempt on the Israeli ambassador in London (Harms 2008). Israel besieged Beirut for three months and then entered Beirut after the assassination of Bashir Gemayal, a Christian politician viewed favorably by Israel. Subsequently, 150 Phalangist militia men massacred between 800 and 2000 unarmed Palestinians in the Sabra and Shatila refugee camps in Beirut, without any intervention by the Israeli forces (Harms 2008). The Sabra and Shatila refugee massacres led to Defense Minister Ariel Sharon's resignation and became branded in the minds of Palestinians and their supporters (BBC 2009). In late 1982, fighting ceased and talks commenced, led by the U.S. and supported by the Multi-National Forces of France, Italy, and the U.S. The May

17 accord provided a brief reprieve to fighting in Lebanon and established a "security zone," but Israel remained, in some capacity, as an occupying force until its unilateral withdrawal in 2000 (BBC 2009).

In the 1980s, when it became clear Israel would remain in Lebanon, resistance to Israel's occupation and to Israel's supporters (i.e., the Western nations, especially the U.S.) steadily grew. "A variety of groups across the political spectrum began to organize attacks against the Israeli occupation forces" (Norton 2007). The disdain for Israel's occupation was accelerated by the al-Nabatiya incident of 1983, when a lost Israeli patrol stumbled into an Ashura celebration. The emotion and confusion of the moment turned to chaos and catastrophe when the patrol leader attempted to disperse the crowd, killing and wounding several Shi'a (Norton 2007). Augustus Norton recounts this incident in detail and considers this a probable turning point in the rising tide of resistance to Israel (2007).

Chaos reigned in Lebanon throughout the 1980s, with a relentless attack-respond pattern of violence where bombings, hijackings, and kidnappings became commonplace. Much of the violence has been attributed to Shi'a militant groups—working on behalf of Iran and Syria- and Iranian Revolutionary Guards (Norton 2007). But these weren't the only nations whose ambitions played out in Lebanon. According to Augustus Norton, a slew of nations were operating, including: Iraq, Iran, Syria, Libya, Saudi Arabia, the Soviet Union, Israel, France, and the U.S. (2007). This decade saw countless terror attacks and kidnappings,[22] much of which were aimed at driving out Western forces such as the U.S. and France and, of course, Israel.

The Lebanese Civil War came to an end in 1990 with the signing of a Charter of National Reconciliation, known as the Taif Accords (U.S. Dept of State 2009). While no fundamental changes were made to the confessional system, the Taif Accords attempted to balance power between the Christian and Muslim blocs. The number of parliamentary seats was expanded from 99 to 128, and divided equally between Christians and Muslims (U.S.

22 There are literally too many to mention, but a few notables are: 1) U.S. Embassy and Marine and French Barracks bombings in Beirut (1983). 2) TWA flight 847 hijacking (1984). 3) Kuwait Airways flight 422 (1988). Iran and Mughniyah suspected on all of these (Baer 2008). 4) Tyre, Lebanon car bombing of Israeli checkpoint, 1987 (Norton 80). Other notables include Iraqi embassy bombing in 1980, Iraqi Da'wa claimed credit (Norton 72), Lebanese hostage crisis (1984), American Embassy in Kuwait (1983) (Coughlin 217-218).

Dept of State 2009). Additionally, the agreement gave some presidential powers to the council of ministers in an attempt to balance power (U.S. Dept of State 2009). The accord also called for the disarming of all Lebanese militias, which was completed by May 1991. Importantly, the accord did not require Hezbollah to disarm (BBC 2009).

c. After the Civil War (1990–2006)

The 1990s in Lebanon were calmer than the previous 15 years. However, formidable challenges remained, especially in the political arena. In 1992, Lebanon held its first elections in 18 years. Unfortunately, Syria's heavy influence in Lebanon prevented legitimate elections. As a transition step, parliamentary appointments by Syria filled 40 seats to restore functioning to the government since only about two-thirds of its members survived to see the end of the civil war (Norton 2007). Augustus Norton writes about Syria's severe influence in Lebanon's elections:

> The appointments coincided with the consolidation of Syria's grip on Lebanon, which was formalized in May 1991 by the Treaty of Brotherhood, Cooperation, and Coordination. The treaty legitimated a heavy Syrian hand, particularly in defense and security realms.
>
> Norton 2007

As a result, the 1992 elections were not seen to be representative of Lebanon's electorate. Many districts had extremely low voter turnout, especially among Christian districts. Christians were boycotting Syria's under-handed involvement in the elections (U.S. Dept of State 2009).

Conflict with Israel continued into the 1990s. Israel's primary adversary in Lebanon had become the militant Shi'a group, Hezbollah (Hezbollah's emergence as a force in Lebanon is discussed in more detail later). Israel launched Operation Accountability in 1993 to reduce the threat from Hezbollah and the Popular Front for the Liberation of Palestine-General Command (PFLP-GC), a hard-liner terrorist group of the PLO's right wing (BBC 2009). The result of Operation Accountability was a modus vivendi[23] between Israel and Hezbollah where Israel agreed not to attack civilians in Southern Lebanon and Hezbollah

[23] A modus Vivendi is a temporary agreement pertaining to rules of behavior that are upheld pending a final agreement.

agreed to focus its actions on the security zone (Norton 2007). This agreement was breached by both parties in 1996, when Hezbollah fired Katyusha rockets into northern Israel, justifying action by claiming Israelis had killed Lebanese civilians (Norton 2007). Israel responded fiercely with Operation Grapes of Wrath aimed at undermining Hezbollah's support base in the South and to put pressure on Syria to rein in the organization (Norton 2007). The plan backfired badly due, largely, to the Qana incident, where Israel artillery was seen as responsible for the deaths of 106 civilians (Norton 2007). Augustus Norton reveals the consequences of the Qana massacre

> No incident in recent memory has inspired more hatred for the Jewish state than the Qana attack. Close to the UN base, a memorial cemetery has been created where the victims are buried, and the site has become a popular memorial for many Lebanese to visit.
>
> Norton 2007

One of Ehud Barak's campaign promises in his candidacy for Prime Minister was to remove all Israeli troops from Lebanon, "either in conjunction with bilateral negotiations with Syria or unilaterally" (Norton 2007). But, territorial disputes derailed negotiations with Syria and so, on 5 March 2000, the Israeli cabinet voted for unilateral withdrawal to be completed no later than July 2000 (BBC 2009). Israeli troops pulled out ahead of schedule and, by 24 May, all Israeli troops had left Lebanon (BBC 2009). In Lebanon, this was a time of celebration and Hezbollah rode a wave of adulation and goodwill. The Second Intifada followed in September 2000 inspired—at least partly—by the perceived success of Hezbollah in driving out Israel (Norton 2007). Hezbollah flags flew in Palestinian camps in Gaza and the West Bank and Nasrallah, Hezbollah's Secretary General, was viewed as a liberator and hero (Norton 2007).

d. 34-Day War: Preamble and Aftermath (2000-present)

Following Israel's withdrawal in 2000, southern Lebanon's border with Israel, the "Blue Line,"[24] saw "harassing fire, aggressive patrolling, and heated rhetoric" between Israel and Hezbollah (Norton 2007). Hezbollah's fame as liberators would peak and give way to internal criticism and pressure for Hezbollah to disarm as Lebanon's other

24 The Blue Line refers to the international border between Israel and Lebanon (Harms 191).

militias had done (Norton 2007). At this same time, there was a growing desire in Lebanon to be rid of Syrian influence. Political conflict erupted when Rafik Hariri—former Prime Minister of Lebanon, seen by many as the de facto leader of the pro-West, anti-Syrian coalition—was assassinated on February 14, 2005, an act most have attributed to Syrian hands (BBC 2009). The Cedar Revolution followed and Lebanon became polarized over the issue of Syrian influence in Lebanon. Hezbollah, seen by many as a tool of Syria, was tightly linked to the pro-Syrian coalition and led the March 8th Coalition as a response to the Cedar Revolution (Butters 2009).

For Israel's part, the U.S. invasion in Iraq and the pressure it placed on U.S.-allied Sunni governments provided a tail-wind for Israel's desire to rid Lebanon of Hezbollah (Norton 2007). The Bush administration[25] shared the Israeli goal of disarming Hezbollah, who the U.S. considered a terrorist organization (Coughlin 2009). When Israel invaded in 2006, Israel promised the Bush administration a "quick and decisive result" that would assuredly result in the disarming of Hezbollah (Norton 2007).

Hezbollah and Israel each miscalculated its adversary. Neither side would emerge as clear winners, though both sides would claim victory. Hezbollah underestimated the international and Arab support that would stand tacitly behind a strong Israeli offensive, and Israel miscalculated the strength and tenacity of Hezbollah's resistance. Both sides paid tremendous costs for their miscalculation, but, strategically, Israel—and the U.S.—would find themselves in weaker positions after the invasion. Hezbollah's strong military response, and its competence in reconstruction, strengthened its solidarity with Sunni Muslims and Palestinians, while undermining the Sunni Arab governments that supported the U.S. and Israel (Norton 2007). However, Hezbollah also paid a heavy price. The Israeli Defense Force inflicted severe damage on Lebanon at a cost of around $4B (Norton 2007), killed 250–500 Hezbollah fighters, and severely damaged Lebanese infrastructure (Harms 2008). Critics of Hezbollah attribute this cost to Hezbollah's reckless provocation of Israel, and amplified their calls for Hezbollah to disarm (Norton 2007). The result of this war was that Lebanon's pro-West and pro-Syrian factions became even more polarized over the

25 At this time, the U.S. and the Bush administration are deadlocked with Iran over Iran's increasingly aggressive nuclear program and its widespread support for terror groups, especially in Iraq and Afghanistan. The U.S. perspective is that Iran is waging a proxy war against the U.S. in Iraq and suspect the same thing is occurring in Lebanon (Coughlin).

role of Hezbollah and Syria. The net effect appears to have been to justify Hezbollah as a necessary resistance force, a role that has since been legitimized by the Doha agreements and the Lebanese parliament (McCreary 2009).

The period after the war has been a time of power struggles and jockeying for influence within the political sphere of Lebanon. The power struggle has been primarily between pro-West elements, led by Christians, Sunnis and Druze, and pro-Syrian factions, led by Hezbollah and Amal. Lebanon's government entered into its first diplomatic ties with Syria in over 40 years, which is seen as evidence of Syria's continuing influence and the changing nature of that relationship since the Cedar Revolution (BBC 2009). The Hezbollah-led coalition has also seen its position strengthened, albeit more politically, with the power of veto and the legalization of its "resistance" militia. However, in 2009, the pro-West March 14th coalition of Saad Hariri won 71 of 128 parliament seats (BBC 2009). The March 8th Coalition, led by Hezbollah, had a strong showing but accepted the victory by its opponent. This is an important sign of easing tension between pro-West and pro-Syrian elements in Lebanon (BBC 2009). This election was hailed by the U.S. and the international community as an important step, and is significant in that it is the first election in decades not eclipsed by sectarian violence and overt corruption (BBC 2009).

e. Emergence of Shi'a Politicization

The rise of sectarianism from the Lebanese Civil War, the Palestinian Movement, and Iranian Revolution converged to lead to the emergence of the Shi'a as a political force in Lebanon. According to Lebanese sociologist Salim Nasr, there were four important factors that led to rising sectarianism (Norton 2007). First, the Lebanese Civil War forced a significant displacement of people and resulted in segmented patterns of living (Norton 2007). Second, growing economic difficulty, income equality, and corruption abetted sectarianism by shrinking the middle class and increasing dependence on social welfare services (Norton 2007). Third, the chaos, deprivation, and widespread corruption brought on by constant wars and strife led to Syrian domination, which in turn facilitated the emergence of religious leadership citing divine wisdom against corruption and moral depravity (Norton 2007). Fourth, regional developments—such as the

ascendancy of the Shi'a in Iraq resulting from U.S. invasion, and violent Sunni extremism—contributed to a strong sense of Shi'a identity (Norton 2007).

Another important factor in the development of Shi'a politicization were the links established between Iranian revolutionaries and Shi'a leaders in Lebanon. By the early 1970s, the radical Shi'a cleric Musa al-Sadr had come to be the leader of Lebanon's Shi'a and founder of Amal, the first Shi'a political party in Lebanon (Coughlin 2009). Sadr was Iranian by birth and had studied in Qom and moved to Lebanon in 1959 (Coughlin 2009). Sadr became a staunch supporter of Ayatollah Khomeini[26] and his revolutionary ideals so much so that when he 'mysteriously disappeared'[27] on a flight to Libya in 1978, it was widely believed that the Shah's SAVAK had assassinated him (Coughlin 2009). Khomeini's Revolution, with Sadr's strong endorsements, would lay the ideological framework for the development of radical Shi'ism in southern Lebanon based on resistance to Israel and support for Palestinians (Coughlin 2009).

f. The Rise of Hezbollah

Originally founded in 1982, Hezbollah did not become a cohesive organization until the mid-1980s. In 1982, Shi'a Muslims were on a path of political emulation of the Iranian revolution and were very much divided over the Palestinian issue (Norton 2007). From this perspective, many Shi'a were supportive of Israel insofar as Israel checked Palestinian influence. However, that would change after the Israeli invasion of

[26] Khomeini became close with the Sadr clan while exiled to Najaf. He also became close friends with Mostafa Chamran before he joined Sadr in Lebanon. Chamran was a founding member of the IRGC (Coughlin 135).

[27] Musa al-Sadr's disappearance is an enigma. Not everyone agrees with Coughlin's characterization. Barbara Slavin, in an interview with Augustus Norton, reveals that many believe Ghadhafi carried out the execution "at Khomeini's behest" to remove his moderate influence from the revolution (2008). All seem to agree, however, that Musa al-Sadr supported Khomeini and that they became close while in Najaf (Slavin 2008).

1982, and particularly the al-Nabatiya[28] incident. As Ehud Barak stated in July 2006, referring to the Israeli invasion and occupation of 1982, "When we entered Lebanon there was no Hezbollah….It was our presence that created Hezbollah" (Norton 2007). While the story may be more complex than this, Barak recognized how Israel's presence was an important factor that allowed a pro-Palestinian, Shi'a faction to emerge and grow.

g. The Rise of Hezbollah and Iran

As mentioned already, Khomeini's relationship with leaders in Lebanon laid the ideological foundation for militant Shi'ism in southern Lebanon. In the early 1980s, however, Iran directly sponsored Hezbollah's emergence (Norton 2007). There is some debate about the nature and extent of Iran's relationship with Hezbollah. According to Robert Baer, Hezbollah has always been and continues to be primarily a proxy tool of the Iranians (2008). In his book, *The Devil We Know*, Baer argues that Iran's Revolutionary Guards Corps (IRGC) arrived in Lebanon to drive Israel and the West from Lebanon and establish its influence there (2008). In so doing, Iran discovered strong Lebanese Nationalism and an "endless pool of street and guerrilla fighters" (Baer 2008). Iran, according to Baer, seized this opportunity and, through its IRGC, sponsored and masterminded the emergence of Hezbollah (Baer 2008). Iran, via its proxy in Lebanon, sought to drive out the West, cultivate resistance to Israel, and even hijack the Palestinian cause. In October 2000, Ayatollah Khameini stated that "Lebanon is Iran's greatest foreign policy success. We will repeat it Dar al-Islam (meaning all across the Islamic world) until all of Islam is liberated," revealing what Baer calls Iran's blueprint for empire (2008). Other authors, such as Augustus Norton, recognize Iran's direct role in the origins of Hezbollah and its continued financial and ideological support, but believe that Hezbollah has developed its own, independent sources of money, power, and influence. While strongly supported by Iran ideologically, financially, and as its main

[28] The Al-Nabatiya incident of 1983 is considered a turning point in the resistance to Israel's occupation of Lebanon. A lost Israeli patrol wandered into an Ashura celebration and attempted to disperse the crowd. The situation got out of hand and "as the crowd threw stones, the Israelis responded with rifles and grenades" killing several Shia. The incident is intrinsic to a commonly shared narrative among Lebanese Shia that emphasizes Israel's disrespect for Islam and the injustice of Israel's occupation (Norton 66)

provider of weapons, Hezbollah has become a force in its own right. Barbara Slavin also supports Norton's view, "the Lebanese group Hezbollah, are not mere proxies and appear to have considerable tactical autonomy and influence on Iranian policies" (2008). In any case, it is clear that Hezbollah has a close and important relationship with Iran[29].

Hezbollah's founding charter, a 1985 Program Document, shows the organization's close ties with Iran and its original founding purpose, which is to resist U.S. imperial influence and the U.S. "spearhead," Israel (Norton 2007). Ayatollah Khomeini stressed America as the reason for all Middle East catastrophes and "legitimates" the right to defend Islam (Norton 2007). Hezbollah's ultimate objective then, according to its original charter, is to "destroy Israel and liberate Palestine," and to see to the "final departure of "America, France, and their allies" (Norton 2007). Israel does not have the right to exist according to Hezbollah's founding charter. Hezbollah faithfully adhered to this charter throughout the 1980s, as evidenced by the uncompromising violence it brought to its enemies.

h. Lebanon: Hezbollah and Syria

Syria shares responsibility for Hezbollah's emergence. Augustus Norton succinctly characterizes Syria's relationship with Hezbollah (2007):

> The new militant Shi'a party was a fortuitous instrument for preserving Syria's interests: supporting Hezbollah allowed Syria to maintain its alliance with Iran, gain the means for striking indirectly at both Israel and the U.S., and keep its Lebanese allies, including Amal, in line.

Norton characterizes Syria's relationship with Hezbollah as one of "convenience" that hinges on Hezbollah continuing to represent Syria's interests, and that Hezbollah understands this as the basis for its strategic alliance (Norton 2007). Hezbollah has and continues to lead the pro-Syrian camp in Lebanon. Indeed, most recent developments in Lebanese politics have centered on the relationship of Syria to Lebanon and, therefore, Syria to Hezbollah (BBC 2009).

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29 According to Con Coughlin, Iran funds as much as 80% of Lebanese Hezbollah's operations (Coughlin 329). If this is indeed the case, this would imply a significant dependency on Iran.

i. Hezbollah After Lebanon's Civil War

Hezbollah seemed to mature along with its Iranian sponsors throughout the 1990s, when it began to consider the possibility of achieving objectives through political means. In 1992, after the Civil War was over, Hezbollah convened a council of 12 members to consider its way forward, asking: Should Hezbollah continue militant resistance or participate in the confessional government it grew up denouncing? Because the Lebanese confessional government was non-Islamic, Hezbollah leadership had to resolve three key questions (Norton 2007):

1. Was participation in a "non-Islamic" government legitimate?
2. Should ideology bend to practical interests?
3. Would Hezbollah, by participating, be co-opted into a secular system, thereby departing from its principles and vision?

To answer these questions, the council sought guidance from Iranian Supreme Leader Ayatollah Khameini (Norton 2007). Khameini advised Hezbollah to participate in the confessional government and continue militant resistance, except with a new focus toward supporting the Palestinian cause (Norton 2007). So, with backing from Khameini, the panel decided (10 to 2) to participate in the political process (Norton 2007).

Hezbollah has evolved into "a Janus-faced" organization deriving legitimacy and power simultaneously from its fierce resistance to Israel, on the one hand, and participation in the confessional political system it grew up denouncing, on the other (Norton 2007). Hezbollah's political capital originally derived from perceived battlefield successes, but increasingly comes from its competence and incorruptibility in providing for the general welfare and social services in Shia dominated areas of Lebanon (Norton 2007). Hezbollah "offers an array of social services to its constituents," including "construction companies, schools, hospitals, and dispensaries" (Norton 2007). Hezbollah's closeness to Iran is evident through its social services program, where a significant portion of its funding comes through what were originally Iranian organizations (Norton 2007). After the 34-day war in 2006, Hezbollah distributed $1,000 to many Lebanese families who had been affected by the war, money that was funneled from Iran through its 'Foundation for the Oppressed' (Coughlin 2009). Hezbollah's duality has even been recognized by some on the international stage,

where some European nations have drawn a distinction between Hezbollah's political organization, agreeing to diplomatic engagement of Hezbollah's political leadership (Black 2009).

Hezbollah's political participation gives it access to government resources and a "public podium," which it can leverage for its own benefit and on behalf of Lebanese Shi'a (Norton 2007). But political involvement also imposes limitations (Norton 2007). Increasingly, Hezbollah finds its actions driven and constrained by the will of its constituency. Its political support is primarily defined by the nature and strength of its relationship with Syria, the existence and capability of its militia, and the extent to which it can provide adequate social and welfare services to Shia dominated areas. In 1997, Al Tufayli[30] organized rallies advancing a populist message—known as the 'Revolt of the Hungry'—that "implicitly criticized Hezbollah for failing its needy constituents…in the suburbs of Beirut," prompting well-founded concern in Hezbollah leadership (Norton 2007). Also, as mentioned earlier, Hezbollah's belligerence leading into the 34-day war in 2006 was partly—if not largely—motivated by the weakness and insecurity it was feeling domestically in a post-Israel Lebanon (Norton 2007). In the years between Israel's 2000 withdrawal and the 2006 invasion, Hezbollah came under fire by many in Lebanon for the presence of a "resistance" militia, especially after the Syrian withdrawal of 2005 (Norton 2007). The ambush on Israeli soil that resulted in two Israeli soldiers being kidnapped and three killed on July 12, 2006 was a demonstration of—and justification for—its militant capability and status as Lebanon's "resistance" force (Norton 2007).

More recently, Hezbollah's role in Lebanon's affairs has become codified in Lebanese law. As leaders of the "Opposition," aka March 8th coalition, Hezbollah has demonstrated on numerous occasions its ability to impede powers of the Lebanese government (Norton 2007). In May 2008, the Lebanese government sought to dismiss the pro-Hezbollah head of security at the airport and investigate a "secret fiber-optic phone network" that Hezbollah maintained was integral to its security operations (Norton 2007). Hezbollah responded fiercely by blocking the roads to the airport and seizing west Beirut.

30 Tufayli famously opposed Hezbollah's decision to become involved in politics. He was one of two dissenting member of the "council of 12" that had voted in favor of Hezbollah engaging as a political party. Shortly after this decision, Tufayli broke away from Hezbollah and eventually established his own political following (Norton).

The government relented, rescinding its decision to investigate (Norton 2007). Furthermore, in the Doha Agreement of 21 May 2008, the “Opposition” (i.e., Hezbollah) won veto powers in the unity government (Norton 2007). On 2 December 2009, the Lebanese cabinet voted on a policy measure that would permit "Lebanon, its government, its people, its army and its resistance" to liberate all Lebanese territory (McCreary 2009). The term “resistance” is well understood to mean Hezbollah so this policy, in effect, legitimizes Hezbollah’s use of force against Israel and justifies its militia (McCreary 2009).

With its increased political role, Hezbollah seems to recognize its political responsibilities. In recent years, Hezbollah has often exhibited pragmatism and a willingness to compromise to achieve political objectives. Hezbollah now appears to be partially constrained by the will of its constituency and the desire to be seen as more than a terrorist organization. It could be argued that its behavior leading into its 2006 war was domestically motivated, as are its efforts to respond to the social ills of the Lebanese. In any case, Hezbollah is now an organization far removed from the one-dimensional, ideological terror organization of the early 1980s.

4. History of the U.S. in the Middle East

a. Introduction

American involvement in the Middle East emerged between World Wars I and II and has since centered on two key interests: secure and reliable access to Middle Eastern oil and security from global threats. World War II loosened Great Britain’s grip on the Middle East and led to the gradual erosion of the Pax Britannica and its gradual replacement by the Pax Americana. This change did not occur all at once and was hotly contested by the British who sought desperately to maintain control of its imperial holdings. On the other hand the Russians, riding momentum from World War II, had a history of involvement in the Middle East and sought to “advance its ambitions into Eastern Europe and a share of control of the Black Sea straits” (Gardner 2009). A global competition emerged between the rising powers of the U.S. and Russia—the Cold War—characterized by a half-century rivalry for control of the world’s strategic oil reserves and some of its most important trade routes. U.S. policy throughout the 20th century was shaped by the Cold War and pervasive fear of Soviet expansion. As this history played out, it laid the foundation for the

U.S.' current role in the Middle East and its continuing efforts to shape the Middle East to ensure access to its oil reserves and trade routes while maintaining national security, at home and abroad.

b. Truman Doctrine and the Marshall Plan

In 1947, the Soviet Union's actions concerned the U.S. and the Truman administration. Russia was attempting to coerce Turkey into bilateral talks aimed at recovering territory that had been lost in World War I and was seen as supporting Communist-led guerrillas involved in a civil war in Greece against British-supported forces (Gardner 2009). Additionally, Russia, desiring to strong-arm oil concessions from Iran, was in violation of the Tehran Declaration[31] of 1943 by maintaining troops in northern Iran beyond the conclusion of the war (Gardner 2009). Russia's inroads into Greece, Turkey, and Iran became the first Cold War crisis as Truman and the West became alarmed at Soviet expansionism (Gardner 2009). Truman, in a letter to his Secretary of State, said, "There isn't a doubt in my mind that Russia intends to invade Turkey and seize the Black Sea straits…another war is in the making" (Gardner 2009).

Against this backdrop, Truman sought $500 million in military and economic aid to support Greece and Turkey against Soviet aggression (Gardner 2009). He asked congress for this aid in a famous speech on March 12, 1947, laying out his vision for what would come to be known as the Truman Doctrine (Gardner 2009). The purpose was to halt Soviet expansion and influence in the Middle East and Western Europe. But the long-term implications of this speech was the "U.S. taking a firm position vis-à-vis the Soviet Union along a line running from Stettin on the Baltic down through Germany and Austria to Trieste" (Gardner 2009). Truman's speech portrayed the communist threat "as so urgent there was no time to lose" (Gardner 2009). It was perceived as a direct challenge to the

[31] In 1943, allied leaders met in Tehran to discuss the possibility of opening a second front. The most enduring result, however, was the Tehran Declaration where the "Big Three" (U.S., Russia, Great Britain) pledged to honor all commitments to Iran's independence and to provide economic aid for postwar reconstruction. The Declaration, achieved by Roosevelt, made the U.S. a direct stakeholder in Iran and placed it on equal footing with Russia and Britain. It would be the basis for U.S. efforts to get Russia out after the war and would serve as Iran's justification for its behavior on the grounds that it had been "failed" by the powers with respect to postwar reconstruction (Gardner).

Soviet Union and "elevated imperial rivalries [between the U.S. and the Soviet Union] to a higher level of statecraft" where principle[32] was paramount to statecraft (Gardner 2009).

The consequences of the Truman Doctrine and its implementation in the 20th century are profound. With its announcement, along with the Marshall Plan the same year, terms such as "containment" and "domino theory" became the general rubric that would shape American policy from that point forward (Gardner 2009). The idea, as the U.S. Minister to Egypt put it, was an "American system …based on intent to help backward countries to help themselves …to lay the foundation for self dependence" (Gardner 2009). The U.S. would project its power, through military basing, naval projection, economic and military aid, and, if necessary, direct intervention in order to "create a system of Cold War protectorates" that would make up the "Free World" and contain the Soviet advance (Gardner 2009). Truman Doctrine laid the foundation for direct and pervasive political involvement in the Middle East and, indeed, throughout the world so long as it could be tied, first, to Soviet Communism or, later, "international communism" and, finally, after the Cold War, to "vital national security interests" (Gardner 2009). It would be broadened to justify involvement in Iran's oil crisis (1951-1953) and Egypt's Revolution (Gardner 2009). President Kennedy broadened the doctrine into "full-blown counterinsurgency theory" in 1961, adding rationales for interventions, such as "non-overt aggression, intimidation, and diplomatic blackmail" to the already existing "resistance to subversive forces" supplied by Truman (Gardner 2009). The basis for the "Imperial Presidency," the foundations of Truman Doctrine would evolve from Truman's Cold War containment to George W. Bush's democratization of the Middle East, in an unbroken line of ideological expansion (Gardner 2009).

c. U.S. and Israel: Creation of a Zionist State

As the Truman Doctrine was being born in the late 1940s, another issue was coming to a head in the Middle East: the question of a Zionist state in Palestine. Great Britain, as Palestine's mandatory power, had made a string of promises, beginning with the Balfour Declaration of 1917, to Zionists regarding the creation of a Jewish homeland in Palestine (Gardner 2009). However, these promises soon came into conflict with Britain's

32 The original draft of the speech included a candid appeal to the strategic importance of Middle Eastern oil. Truman opted to have it removed to appeal to a more idealistic nature in the public, fearing that oil would not carry public opinion (Gardner 69).

desperate efforts to save its imperial enclaves, causing Britain to slowly begin backing away from its promises. London feared "large-scale Jewish immigration would wreck its relations in the Middle East," thus making it difficult to maintain its bases in Libya, Palestine, and control of the Suez Canal (Garnder 57–58). On the other hand, the U.S., driven by a surge in popular opinion following revelation of the atrocities of the Holocaust, became largely favorable to the idea of Jewish immigration, and Truman "began advocating 100,000 refugees to Palestine" (Gardner 2009).

Truman's newfound support for Zionist immigration caused strain all around. Great Britain was frustrated with the U.S. for what it saw as an effort to supplant the British Empire in the Middle East. On the other hand, the U.S. thought Britain was trying to draw it into "joint responsibility for the Palestine question" (Gardner 2009). American diplomats voiced concern that support for Zionism would lead to "a wave of revolutionary fervor that could cause the Middle East to fall under the sway of Russia (Gardner 2009). U.S.-Saudi Arabia relations also became strained. Roosevelt had a standing promise to King Ibn Saud that the U.S. would respect "self determination" for Middle Eastern nations (Gardner 2009). King Saud saw this as a renege on Roosevelt's promises and warned 'serious consequences' for American policy (Gardner 2009). But Truman stood-fast, acknowledging that support of a Jewish homeland would "command the support of American public opinion" and insisted upon 100,000 Jews in Palestine (Gardner 2009).

Frustrated, the British threw up its hands in 1947 and "tossed the question to the UN" (Gardner 2009). The UN advanced a partition plan that was disagreeable to everyone. Finally, on May 15, 1948, Britain abruptly ended its mandate on the grounds it was no longer economically sustainable (Gardner 2009). The same day the British mandate ended, Truman extended de facto recognition to Israel—fearing the Soviet Union would beat him to the punch—and offered the first "of almost constant loans and grants that have become a given" (Gardner 2009). In a letter to Israeli president Chaim Weizman, Truman confirmed he would "oppose any territorial changes in the November 29, 1947[33] resolution,

[33] November 29, 1947, is the date the UN Partition Plan was adopted by the UN Special Committee on Palestine (UNSCOP). The U.S., the most aggressive proponent of the plan, officially recognized these borders, and this was evident in Truman's letter to Weizman (Gardner).

which are not acceptable to Israel" (Gardner 2009). The U.S., in supporting the creation of Israel, was beginning an alliance that would "thereafter define the American approach to the Arab world" (Gardner 2009).

Despite the establishment of Israel and the 1947–48 wars, the Arab world still had not united. Instead, it led to a "series of upheavals," brought on by a young generation "nurtured on the injustice of Zionist dispossession of Arab land with the assistance of Western powers" (Gardner 2009). However, the CIA warned "that the Israelis had won the first battle, but the Arab-Israeli war promised to be a long one," stating that "Arab supply lines were insufficient to support a full-scale conflict, but they can be expected to support guerrilla activities indefinitely" and that "with boycotts and blockades, Israel's security will be continuously threatened…and its existence will be entirely dependent on the continuing good will of some outside power" (Gardner 2009). Robert McClintock, Office of UN Affairs, recognized the potential threat from "fanatical and overwrought people" who might injure U.S. strategic interests by taking "reprisals against oil investments and rescinding air base rights" (Gardner 2009).

In its first official effort to protect its interests and Israel, the U.S. entered into a tripartite declaration with France and Great Britain in May 1950 in which each promised not to supply arms to any country unless that country "promised not to undertake any act of aggression against any other state in the Middle East" (Gardner 2009). The declaration goes on to pledge that any state "preparing to violate existing frontiers and armistice lines" was subject to "immediate action both within and outside the UN to prevent such violations" (Gardner 2009). This declaration clearly served to protect the nations in the Arab-Israeli conflict, especially Israel. Additionally, it was an advance on the Truman Doctrine as it formalized the role of the Western powers—meaning mainly the U.S.—as having "the right to determine questions of war and peace in the Middle East" (Gardner 2009). Washington had "created a protectorate and made itself the nation of last resort for all sort of grievances" (Gardner 2009).

d. U.S. and the Iranian Oil Crisis

In 1941, Britain and Russia invaded Iran ostensibly to halt pro-German activities and remove Shah Reza Khan (Gardner 2009). Both nations halted at demarcation

lines that had historically marked their spheres of influence, Russia in the north and Britain in the south (Gardner 2009). Iran appealed to the U.S. for support but the U.S. "excused [the occupation] for the common good" in light of the threat faced with Nazi Germany (Gardner 2009), but Roosevelt disavowed "any designs on the territorial integrity of Iran" stating that all nations should have equal access to Iranian oil (Gardner 2009). Britain owned a controlling stake in the Anglico-Iranian Oil Company (AIOC), which had been authorized to "safeguard the Royal Navy's fuel supply" (Gardner 2009). Russia too sought inroads on Iran's oil; all three major players were quietly positioning for a postwar world.

In light of the damage wrought by World War II, Iran had come to expect some form of reparations for its cooperation with the Allies. After all, post-war reconstruction assistance had been codified in the Tehran Declaration of 1943 when the "Big Three" met in Tehran during the war (Gardner 2009). Shah Reza Pahlavi began to lobby in Washington for reconstruction aid under the U.S. Lend-Lease[34] program complaining he'd been "left out of the Truman Doctrine and Marshall Plan[35] and was not even afforded a treaty such as the newly-formed NATO (Gardner 2009). The U.S. politely shrugged, citing other more pressing matters, thus, according to Lloyd Gardner, beginning "an unsatisfactory thirty-year dialogue" with Iran (2009). The result was that when the Shah returned home to Iran empty-handed, "lack of American aid" began to supplant "British intrigue" as the "whipping boy of Iranian politics" leaving many Iranians feeling like they were left to face the Soviet Union alone (Gardner 2009). This caused some in Washington to fear that Iran might consequently turn to the Soviet Union for support (Gardner 2009).

This was the backdrop when the majlis began to reconsider the terms of the long-standing AIOC concession (Gardner 2009). The concession had been under negotiation since 1939, but a supplemental agreement was stalled on "the key issue of Iranian access to the books" (Gardner 2009). Facing the Shah when he returned from Washington was two

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34 Lend-Lease was the system by which the U.S. aided its World War II allies with war materials and other raw materials. This was a mechanism to circumvent existing U.S. law, which required the allies to pay "cash-and-carry" for U.S. arms and materials (Encyclopedia Britannica). Lend-lease would be broadened to other nations, especially in the Middle East, to justify foreign aid and became a central plank to U.S. global ambitions after World War II (Gardner).

35 The Marshall Plan (1947) was a U.S.-sponsored program designed to rehabilitate the economies of 17 western and southern European countries after World War II in order to create stable conditions for democracy to survive. The U.S. feared that poverty, unemployment, and dislocation after World War II were reinforcing the appeal of communism to voters in Europe (Encyclopedia Britannica).

key opponents of the Nationalist Front party, Mohammed Mossadeq and Ayatollah Kashani, both holding seats in the parliament (Gardner 2009). But Britain's AIOC and the Iranian majlis were dug in on their positions. The U.S. pleaded with Britain for flexibility since "profits were far from disappearing" and that they "could not go on thinking Middle Eastern countries were unaware of arrangements being negotiated elsewhere," referring at least partly to ARAMCO's[36] deal with Saudi Arabia, an already sore spot with the British (Gardner 2009). In the end, neither side would budge.

The developing crisis pushed the U.S. toward bringing Iran into the Truman Doctrine protectorate over fears that if Iran fell to the Soviet Union, they would have enough oil to conduct World War III (Gardner 2009). Truman compared the situation with that of Greece, "if we just stand by, they'll move into Iran and take over the whole Middle East. There's no telling what they'll do if we don't put up a fight now" (Gardner 2009). From the U.S. perspective, the world's strategic oil was at stake. Washington blamed British ineptitude and inflexibility for allowing this crisis to occur, however, meeting the demands of the majlis could set a precedent for other oil-bearing nations to follow that would disrupt world oil supplies (Gardner 2009). According to American oil executives, fully conceding to Iranian nationalists over AIOC would jeopardize "all American investment overseas" and, in their opinion, losing Iran completely would be preferable to a too-favorable deal for Iran (Gardner 2009).

In May of 1951, the majlis acted to nationalize Iranian oil (Gardner 2009). The U.S. made one last effort with the Shah to stop nationalization, but discovered a Shah who, while opposed to nationalization, was "broken and dejected" fearing loss of his throne and maybe his life if he opposed Mossadeq and nationalization (Gardner 2009). Under pressure, the Shah immediately moved to appoint Mossadeq as the Prime Minister to save his throne (Gardner 2009). The British responded harshly to nationalization by undertaking

36 ARAMCO was founded by the Standard Oil Co. of California (Chevron) in 1933, when the government of Saudi Arabia granted it a concession. Other U.S. companies joined after oil was found near Dhahran in 1938. In 1950, ARAMCO opened a pipeline from Saudi Arabia to the Mediterranean Sea port of Sidon, Lebanon (Encyclopedia Britannica). ARAMCO was America's opening bid to become a major economic stakeholder in the Middle East. ARAMCO became a major point of contention between the U.S. and Great Britain since the U.S. arrangement with Saudi Arabia was comparatively favorable to existing deals held by other countries (i.e. AIOC in Iran). Additionally, the U.S. Government subsidized ARAMCO, making oil exploration comparatively more favorable outside the U.S., encouraging U.S. oil businesses to grow in the Middle East. In Britain's opinion, this placed undue pressure on its AIOC arrangement (Gardner).

"every effort to insure Iran couldn't sell its oil," even threatening military action to increase pressure on Iran's economy (Gardner 2009). In July 1951, the British closed down its oil facilities at Abadan appearing ready to wait out Mossadeq and the Iranian nationalists, hoping the pressure would force a new government (Gardner 2009).

The Soviet specter loomed large as the U.S. wrestled with the ongoing crisis. With the British threatening military action and enforcing an oil embargo and Mossadeq and Iranian nationalists settled into their positions, U.S. policy makers slowly began to identify Mossadeq and his Nationalist movement—with its apparent links to the Tudeh Party—as the problem that needed fixing (Gardner 2009). On 21 September 1951, the Psychological Strategy Board released a statement saying that "there is limited agreement that Mossadeq will have to be replaced before chances for an oil agreement can improve" (Gardner 2009). Mossadeq, with his economy under severe duress, appealed to Washington for aid. His arguments were received well by Truman and the American public, as he cited years of exploitation and ill-treatment at British hands (Gardner 2009). But, in the end, the U.S. offered no aid to Mossadeq and the Iranians. Truman told Mossadeq if he wanted revenue, he should complete a deal with the British (Gardner 2009).

Dwight Eisenhower and State Secretary John Foster Dulles entered the White House in 1952. They too feared a power vacuum in Iran might be created that would be filled by the Soviet Union (Gardner 2009). By now, the British, Mossadeq, and some inside the U.S., knowing how to elicit action from Washington, were all invoking images of a communist takeover of Iran and increasingly tying Mossadeq to the leftist Tudeh Party (Gardner 2009). On 4 April 1953, Eisenhower authorized $1 million to be used "in any way that would bring about fall of Mossadeq" (Gardner 2009). By the end of August 1953, Mossadeq was under house arrest and the Shah was safely returned to his throne (Gardner 2009).

U.S. involvement in the 1953 coup has had significant consequences, many of which are still present today. In the immediate aftermath, the U.S. took the lead stake with respect to Iranian oil, restricting the British to a minority position (Gardner 2009). In the longer term, the U.S. was wed to the Shah, having made a significant investment in his success (Gardner 2009). The U.S. often had to pay for the Shah's loyalty and the Shah knew it (Gardner 2009). For a quarter of a century, the Shah was "one of the biggest customers

ever for American military products" and heavily influenced U.S. foreign policy (Gardner 2009). The Shah's rule was one of a "hollow crown," as Gardner would put it, where his only real power lay in his knowledge of how to exploit American fears to maintain control of his country (Gardner 2009). The affair would eventually come to a disastrous end in 1979, when the fanatical Ayatollah Khomeini led his Islamic Revolution against the Shah, an event, according to Gardner, which was an "almost inevitable result of the 1951-1953 oil crisis" (2009).

e. U.S. and Egypt: Egyptian Revolution, Suez Crisis, and Nasserism

As oil nationalization heated up in Iran (~1950), the winds of nationalism were blowing elsewhere in the Middle East. Egypt, like Iran, also had a long and complicated history with Great Britain, centered on control of the Suez Canal. From the time of its construction, in 1869, the Suez Canal's value as the lifeline to India had been paramount in British strategic thinking (Gardner 2009). During World War I, London declared Egypt a protectorate state and, in 1936, imposed a treaty on Cairo authorizing "10,000 troops, 400 pilots, and support personnel for 20 years" to be based at Suez (Gardner 2009). From Britain's original occupation in 1882, Egyptian nationalism developed, as it had done elsewhere, in opposition to imperial exploitation.

By 1950, Egypt and Israel posed a vexing problem for U.S. policy makers. The Suez Canal, and the base that secured it, took on new importance as the Suez had become "the main transit route for Middle Eastern oil" (Gardner 2009). The Arab-Israeli wars of 1947-48, the creation of the state of Israel, and the rising tide of nationalism opposing Britain had Egypt on the brink of revolution and, from the U.S. perspective, endangered security of the Suez and highlighted the Egypt-Israel-Palestinian impasse (Gardner 2009). The U.S. identified Egypt as a critical player in resolving both of these issues and sought Egypt's leadership in the U.S.-proposed Middle Eastern Defense Organization[37] (MEDO). But from Egypt's point of view, Israel posed too many problems. Egypt believed the "open

[37] The Middle Eastern Defense Organization (MEDO) was a U.S.-proposed NATO-like security pact intended to provide for the defense of the Suez Canal, provide military security for the petroleum producing regions, and to the northern tier countries of Iran, Turkey, and Pakistan. Truman and his Secretary of State Dean Acheson were committed to MEDO but Egypt's resistance and the lukewarm reaction of other Arab states made realization of MEDO impossible. It was dropped after Truman but elements of MEDO were included in the Baghdad Pact of 1955 (Karabell 2010).

door" immigration policy espoused by David Ben-Gurion—and supported by the U.S.—would inevitably lead to Jewish expansion and the annexation of additional Arab land (Gardner 2009). Furthermore, by recognizing Israel, Egypt was essentially limiting Arab ambitions by allowing a "new outpost of Western imperialism," which was, of course, unpopular with Egyptian nationalists (Gardner 2009). On the other hand, the Israelis argued that the Palestinians formed a "fifth column" of those who sought its destruction and by giving the Palestinians the little land it had it would "be committing economic suicide" (Gardner 2009). Ben-Gurion, aware that the U.S. was considering Egypt as the center of its Middle East defense strategy, began to assert Israel's suitability for this purpose claiming Israel would be "the decisive factor in a successful defense of the Middle East" (Gardner 2009). The U.S., ever-mindful of the Soviets, was concerned about the possibility of an arms race between Egypt and Israel that might spread throughout the Middle East (Gardner 2009).

Nationalistic tensions set aflame by 1952. On 25 January, a fight erupted between the British garrison at the Suez base and Egyptian auxiliary police, resulting in 41 police dead and another 72 injured (Gardner 2009). Demonstrations in Cairo followed and symbols of British power and prestige were destroyed and many civilians killed (Gardner 2009). The British responded harshly the following day—Black Saturday—sending additional troops from its Suez base to end the rioting (Gardner 2009). The British appealed to Washington for help in putting down violence in Egypt, but the U.S. rejected on the grounds that it wouldn't help the situation (Gardner 2009). On 23 July 1952, a group of senior Egyptian army officers mounted a successful revolt. King Farouk, the Egyptian ruler, appealed to both London and Washington for help but neither "would lift a finger," concerned they would jeopardize the Suez by propping him up (Gardner 2009). Egypt's revolution left power in the hands of the Egyptian military and General Naguib, supported by a strongman named Gamul Abdel Nasser (Gardner 2009). The new Egyptian regime, purporting to be a pro-West regime, immediately appealed to Washington for aid, but it would come with strings: the U.S. wanted a testament of Egypt's "Cold War orientation," for starters, by publicly supporting the U.S. in Korea (Gardner 2009). In the longer term, the U.S. hinged further aid on Egypt taking a leading role in MEDO, long-term arrangements to guarantee the Suez, and, the most stubborn of all, an Egyptian peace agreement with Israel (Gardner 2009).

John Foster Dulles and Egypt's Naguib (Eisenhower had taken office by this point) got off to a promising start, but Dulles aptly recognized that "the Israel factor, and association of the U.S. in the minds of the people with the French and British colonial imperialist policies, are millstones around our neck" (Gardner 2009). Dulles, trying to apply an even-handed approach, "all but promised arms to Egypt," which angered the British (Gardner 2009). Israel was also concerned over a "perceived policy shift" understanding that arms to Egypt would certainly end up turned on Israelis. But Naguib was deposed in 1954 and replaced by Gamel Abdul Nasser, who the U.S. hoped would continue cooperation with the U.S. (Gardner 2009).

Initially, Nasser seemed to portend a continuation of the goodwill General Naguib had established with the U.S., but he quickly proved to be "less amenable" than his predecessor, particularly regarding the role of the British at Suez (Gardner 2009). Britain's sponsoring of the Baghdad Pact on 24 February 1955 did not help matters. The Baghdad Pact was an alliance between Iraq, Turkey, and Pakistan that was backed by Britain—meaning it was at least tacitly supported by the U.S.—that had the effect of strengthening Iraq as a rival for Arab leadership (Gardner 2009). For the U.S., the Baghdad Pact was important in that it created a "Northern Tier" to defend against a Soviet advance and had the additional benefit of containing Arab nationalism, but the U.S. was unwilling to sign on account of its effects on other Arab nations, such as Egypt (Gardner 2009). Nasser, unhappy with the diminishment of his position, set to work to construct his own "Pan-Arab Pact" viewing Syria, Saudi Arabia, and Jordan as potential members (Gardner 2009). Meanwhile, he continued to seek U.S. aid, but Nasser would not accept the strings that were attached, especially peace with Israel. Thus, in 1955, after an Israeli Gaza raid began to focus attention on Nasser's failure to attain arms, Nasser vowed to organize the Middle East's defense "without any assistance from the West" (Gardner 2009). Then, to the world's shock, on 27 September, 1955, Egypt announced an Egyptian-Russian arms deal totaling around $200 million, including 200 MiG-15s, 50 Ilyushin bombers, 60 Half-Tracks, and 275 T-34 tanks (Gardner 2009). The French responded immediately transferring Mystere IV fighters from NATO to Israel. An arms race had begun (Gardner 2009).

f. Suez Crisis (1956)

The U.S. had become frustrated with Nasser's open defiance of the West and acceptance of Russian aid and sought to isolate him from the rest of the Arab world (Gardner 2009). The turning point in U.S.-Egypt relations came when the U.S. backed away from a loan to finance the Aswan Dam, a major domestic priority for Nasser (Gardner 2009). The U.S. felt secure that the Russians could not afford to support Egypt on such an undertaking and that Nasser would eventually come crawling back (Gardner 2009). But Nasser responded with scathing attacks against the U.S. on 24 July 1956, followed immediately by an announcement by the Russians that they were offering to finance the dam (Gardner 2009). Two days later, on 26 July 1956, Nasser announced he did not need U.S. aid, because the "sons of Egypt were rising up to direct the canal company." Nasser had nationalized the Suez Canal (Gardner 2009).

The wheels of war immediately began to turn in London. The British were now determined to be done with Nasser, a goal not unwelcome by France, Israel, and the U.S. (Gardner 2009). Israel wanted Nasser gone due to the frequent border disputes it continued to have with Egypt. The U.S., on the other hand, had a more reserved view. The U.S. wanted Nasser gone but "didn't want the political consequences of a direct assault on Egypt's right to nationalize the canal company" and feared opening a door for the Russians to move aggressively into the Middle East (Gardner 2009). The U.S. knew the British were planning for war, but saw Britain as using the Arab-Israeli conflict to advance their aims (Gardner 2009). Nonetheless, backed by Britain and France, Israel launched an attack on Egypt on 29 October 1956. The plan called for an Israeli invasion into Sinai, then Britain and France would issue an ultimatum to cease fighting and put boots on the ground to "enforce" the ultimatum, ensuring the belligerents retreated a certain distance from the canal (Gardner 2009). The plan was essentially a ruse to justify air strikes on Egyptian airfields, get troops on the ground, and, ultimately, unseat Nasser (Gardner 2009). But what it turned out to be was a miserable failure. The U.S. condemned the attack harshly, with Eisenhower

furious, saying, "if we do not fulfill our word[38] Russia is likely to enter the situation in the Middle East." The U.S. threatened to drop U.S. support for the British currency (Gardner 2009). Meanwhile, the Russians threatened to launch ICBMs against Great Britain and France (Gardner 2009). Russia and the U.S. sponsored a UN resolution demanding immediate cease-fire.

The consequences of the Suez debacle are many. The Russians were able to pass as "defenders of the Egyptian revolution" even while they were in the middle of suppressing Hungarian freedom fighters (Gardner 2009). For the British, Suez was officially the end of serious influence in the Middle East, "no Arab leader can be Great Britain's friend and Nasser's enemy" (Gardner 2009). Britain's loss was Nasser's gain as he became the hero who'd successfully stood up to the British. With its chief sponsor weakened, the importance of the Baghdad Pact evaporated, reducing Iraq as an Arab rival to Nasser and Egypt (Gardner 2009). For Israel, a strengthened Nasser was surely a loss. The U.S., at least for a time, was rewarded as "champions of the right" for standing up against British imperialism (Gardner 2009). Saudi Arabia also began to move closer to the U.S., fearing Nasser's rising power (Gardner 2009). In the longer run, however, the hostility provoked between Israel and Nasser proved to be the most enduring effect.

g. 1956–1967

The interim period between the Suez Crisis of 1956 and the Six-Day War in 1967 saw a continuation of difficulties. Nasser still troubled Washington by remaining recalcitrant on the issue of peace with Israel and continuing to propagate anti-American messages (Gardner 2009). This period also saw a bloody revolution in Iraq in July 1958 that toppled Iraq's pro-Western Prime Minister, bringing to power the decidedly anti-Western Abdul Karim Qassem (Gardner 2009). Qassem roiled Washington and pro-West elements within the Middle East with a series of worrisome moves. Qassem pulled Iraq from the Baghdad Pact, threatened Kuwait's independence, purged all Westerners, and challenged the

[38] The "word" Eisenhower means to fulfill is the promise made in the tripartite declaration of May 1950 between the U.S., Britain, and France, in which each promised to intervene if any nation in the Middle East was attacked. The pact was designed to ensure Israel's safety but applied to all Middle Eastern countries to position the U.S. as bearer of the mantle of Middle East peace, with the intent to keep the Soviet Union from direct involvement (Gardner).

Iraqi Petrol Company[39] (IPC), which "mounted real threats to American interests" (Gardner 2009). Qassem's challenge of the IPC eventually became his undoing, however. Qassem, recognizing that the American-led IPC was only using about 1.5% of its available area for exploration, wanted to reclaim 60% of the total for Iraq (Gardner 2009). After negotiations broke down in 1961, Qassem passed Law 80 essentially nationalizing all of the IPC-owned land except that which had already been explored (Gardner 2009).

By 1963, Washington had had enough of Qassem and planned a covert coup using Saddam Hussein and anti-Communist Baathists as the means (Gardner 2009). The coup occurred on 3 February 1963, and the Baath Party followed it up with "a house to house hunt for communists" that resulted in 8,000 Iraqis killed (Gardner 2009). This began a string of events that would eventually result in Saddam Hussein's rise to power (by a coup) and then his overthrow by the U.S. in 2003. In the short run, however, the Iraqi Baathists would again give Nasser an Arab rival. In the longer term, the Baath Party would prove hostile to Israel, a menace to its own people, and a threat to U.S. interests by championing pan-Arabism and demanding "Arab control over Arab resources" (Gardner 2009).

h. 1967 Arab-Israeli War

Nasser's support of Yemeni rebels against Riyadh-backed pro-Government forces in the 1963 Yemini Civil War, along with his role in setting up the Palestinian Liberation Organization, finally "confirmed in the minds of U.S. policy makers that Nasser's role was never going to be a constructive one (Gardner 2009). In 1967, Egypt closed the straits of Tiran, blocking Israel's access "to the Red Sea and beyond," and Israel immediately began to make its case to Washington against Egypt: "Egypt, backed by Russia, is looking to roll up the whole Middle East" (Gardner 2009). Israel was advocating more military and economic assistance, but more importantly, was looking for assurances from Washington that Suez would not be repeated should it respond militarily (Gardner 2009). Lyndon Johnson, now in the Whitehouse, was mired in Vietnam and was hesitant to be seen as directly

[39] Iraqi Petroleum Company (IPC) was established in 1928 from the remains of the Turkish Petroleum Company and was composed mostly of American and European oil companies. The IPC offered Iraqis a 20% share in the properties it developed, but it never fulfilled this promise (Gardner 2009). This fact, along with accusations of manipulated production quotas and disputes over the laggard development of Iraq's oil resources dogged Iraqi politics until the Ba'ath Party nationalized Iraq's oil in 1973 (encyclopedia.com 2010).

involved, but did seem to provide the necessary reassurance (Gardner 2009). With tacit U.S. support, Israel waited for the spark, which was provided when Syria permitted "PLO raiders to strike out of Gaza" (Gardner 2009). The Six-Day War ensued and the U.S. would not intervene until all Israeli objectives had been achieved (Gardner 2009).

On the eve of the war, the thinking in the White House was that, if Nasser were removed, a "potentially new phase" could be opened in the Middle East attended by "economic development, regional collaboration, and acceptance of Israel" (Gardner 2009). On the other hand, it was recognized that the result of a war could end up with the "crystallization of a bloc unified only by hostility to Israel," thus requiring the U.S. to "maintain Israel as a kind of Hong Kong enclave in the region" (Gardner 2009). Johnson believed that it was possible that, by triumph of Israeli arms, that the door could be opened to moderate Arab leadership (Gardner 2009).

Israel did triumph and Nasser was removed, but it did not bring widespread resolution to the Arab-Israeli conflict that Johnson had hoped. However, the 1967 war did have many other significant consequences. Nasser was replaced (by Anwar Sadat) and a lasting peace was achieved between Egypt and Israel and between Egypt and the U.S. that exist to this day (Harms 2008). The war also further cemented the U.S.-Israel alliance and Israel's role as a power in the Middle East (Harms 2008). Soviet rivalry in the Middle East was effectively ended as Russia's ties to Egypt were severed, its only serious ally in the region. It also demonstrated the "inferiority of Russian-supplied arms" (Gardner 2009). From this point forward, the U.S. was the sole superpower in the Middle East.

i. Summary of Recent U.S. History

U.S. history in the Middle East—from World War I through the 1967 Six-Day War—saw the U.S. replace the old European colonial powers of Great Britain and France, forge an unalterable connection with the young state of Israel, and triumph in the region over its Cold War archrival. U.S. history since the 1967 war, with respect to the U.S.' role, policies, and objectives, has gone largely unchanged. The U.S. still seeks secure oil supply lines and national security by exerting political, military, and economic influence on Middle Eastern nations. What has changed since 1967, however, is the nature of the

threat to American interests in the Middle East. The Soviet threat has faded and, in its place, has emerged militant Islamic fundamentalism, a result that continues to define the nature of America's relationship with the Middle East.

The year 1979 is considered a "watershed" period in U.S.-Middle East relations (Shuster 2004). The Iranian Revolution, as discussed earlier in this chapter, brought about a drastic change in Iranian leadership that has consistently opposed U.S. interests. The same year, the U.S. "funded, armed, and organized" Soviet opposition in Afghanistan, which would later have consequences as Osama Bin Laden, a veteran of the Afghan War, would "turn his hostility toward the U.S." and mastermind a series of terrorist attacks (Shuster 2004). These terrorist attacks would result in the ongoing war with the Taliban and worldwide hunt for Al-Qaeda and its operatives, including Bin Laden. The U.S., in the Iran–Iraq War, would stand with Iraq against Iran and then, in 1991, against Iraq for its invasion of Kuwait. In 2003, as part of the Global War on Terror, the U.S. would invade Iraq again, but this time to ouster its one-time hireling Saddam Hussein and undertake the first step in the "democratization of the Middle East" (Pressman 2006). Foreign policy in recent years[40], since 9/11, revolves around combating terrorism through application of force aimed at democratizing the Middle East, and thereby undermining support for terrorists (Pressman 2006). This policy sits on the same fundamental assumptions (i.e., domino thesis) as did the Cold War containment policies of the Truman Doctrine, essentially making it the latest in an unbroken line of expansions of the Truman Doctrine since 1947.

C. MODELING APPROACHES

Political decision making is of great importance and a wide variety of analytic techniques have been developed to better understand them. Many traditional techniques are based on qualitative approaches that often seek to understand—or predict—decision making by gaining a thorough understanding of the political system, the actors within it, and how behavioral norms of decision makers ought to occur under a given set of circumstances. Increasingly, however, advanced mathematical and computer science techniques are being applied to enable understanding of complex political systems, the decision-making dynamics they present, and to better understand what drives decisions of actors within these systems.

40 President Barack Obama's foreign policy is omitted, since it is still too recent to consider.

This section briefly discusses a few of these modeling and analysis techniques, focusing particularly on those that address key requirements of this thesis: 1) modeling a complex political system, 2) analysis of political decision making, and 3) aiding forecast of political decisions.

1. Systems Analysis

Elisabeth Pate-Cornell et al. *Probabilistic Modeling of Terrorist Threats: A Systems Analysis Approach to Setting Priorities Among Countermeasures* provides some useful insights into a variety of techniques commonly used to analyze decision making in complex systems (2002). Pate-Cornell et al. uses a combination of Systems Analysis, Decision Theory, Applied Probability, and Game Theory to model the dynamics between U.S. policy makers and a given set of terrorists groups who might have interest in executing a terrorist attack against the U.S. (2002). The ultimate goal of her research is to help "set priorities among threats and among countermeasures" (Pate-Cornell et al. 2002) in an effort to aid U.S. policy makers.

Pate-Cornell et al. uses Systems Analysis to structure an "over-arching model," envisioned as a "system of systems" where model components can themselves be modeled as a system at an arbitrary level of detail (2002). This approach allows the modeler to specify the scope of the analysis and to define relationships within and between elements of the system under consideration. According to Pate-Cornell et al., the Systems Analysis approach is useful to "bring together the mass of information" and provides a framework to understand "effects of interdependencies among networks and systems" (2002).

2. Decision Analysis

For inputs, the Pate-Cornell et al. uses well-established utility theory concepts to rank order preferences and transform "expert opinion" into quantifiable data that has numerical interpretation and can be compared (2002). In her model, terrorist decisions are modeled

prescriptively[41] and U.S. decisions are modeled descriptively[42] (Pate-Cornell et al. 2002). Each actor's decisions are modeled using influence diagrams and the decisions to be analyzed are predetermined based on a set of prescribed feasible actions (Pate-Cornell et al. 2002). The goal for the U.S. is to minimize the consequences of a potential terrorist attack while the goal for the terrorists is to maximize damage to U.S. interests. The objective function for each actor is modeled as a linear summation of its interests, but the model allows for the relaxation of this assumption (Pate-Cornell et al. 2002). Uncertainty is modeled through various random variables and arises from several sources. First, there is uncertainty with respect to the terrorists: identity, intent, and means (Pate-Cornell et al. 2002). Second, there is uncertainty about event outcomes given a terror group, the terror group's intent, and its means. Finally, there is uncertainty about how each actor perceives the uncertainty contained in the other actor's situation—that is, what a given actor believes the other actor believes (Pate-Cornell et al. 2002).

The model is a "two-sided" model to account for the fact that "both sides act in response to their beliefs about the intentions and capabilities of the other side" (Pate-Cornell et al. 2002). This multiplayer dynamic is modeled by considering the system from two perspectives: the terrorists and the U.S. Each side is modeled as its own influence diagram where all sources of information about its opponent are modeled as chance variables that reflect its beliefs about the decisions the other will make. Each diagram has a unique utility function developed based on the preferences of that actor (terrorists or U.S.). In the case of the terrorists, the utility depends on the amount of damage that is inflicted and the symbolism of the attack (Pate-Cornell et al. 2002). The U.S. value is to minimize its "disutility," which amounts to minimizing the damage and symbolism of the attack (Pate-Cornell et al. 2002).

The model is conceptualized as a dynamic game that plays out over a finite period of time. This "dynamic and game-theoretic" component is intended to capture the changes that occur over time as the two sides interact within the framework of the model (Pate-Cornell et al. 2002). To achieve these changes, the model requires updating of "moves and countermoves, changes in strategy and means, lessons learned about the effectiveness of

41 A prescriptive model of decision making describes what the decision maker *should* and *can* do (Dillon n.d.).

42 A descriptive model of decision making describes what the decision maker *actually does or has done* (Dillon n.d.).

different tactics and strategies, evolution of organizations, emergence of new groups, or a new structure of existing groups and networks" (Pate-Cornell et al. 2002). Pate-Cornell prescribes these update steps for model maintainers when running the model (Pate-Cornell et al. 2002):

- Model structure (new nodes that translate into new nodes and new links).
- Possible realizations of each variable.
- Probabilities of the different realizations.
- The objective function of the perpetrators (i.e., terror groups).

The model advanced by Pate-Cornell et al. seeks to aid in forecasting by providing a decision support tool to the user to that serves as a "reality check" to traditional analysis based on expert opinion (2002). The approach used has the benefit of integrating data from multiple sources to wash out biases and to place the alternatives in quantitative terms for easier comparison. By requiring the user to participate in updating the model over time, this approach has the added benefit that users of the model are factored in throughout the process. This approach is flexible and seems to effectively integrate quantitative and qualitative forms of analysis.

Most important decision situations require an analysis of two or more "players" whose decisions must account not only for uncertainty in chance events, but also for uncertainty in the decisions of actions taken by others, since other players' decisions will affect the outcome. To adjudicate decisions, Game Theory (and Decision Theory in general) requires certain key assumptions. First, the decision maker must be rational under uncertainty by satisfying the rationality axioms (refer to James N. Webb's *Game Theory: Decisions, Interaction, and Evolution* (2007)). If an actor is rational, then a utility function can be defined and optimal payoffs for current and future decisions can be calculated using expectation (Webb 2007). So another important assumption is that each decision maker must calculate his (and all other actors') expected utility based on rational self interest where each actor chooses the optimal decision—by maximizing expected utility—in all remaining decisions (Webb 2007). In many cases these assumptions seem to hold, but as Pate-Cornell et al. states people "often show circularities in preference" and "do not account for probabilities of outcomes (which they often don't know how to calculate)" (2002). Decision

analysis models also require inputs about uncertainty that are often not known with a reasonable degree of accuracy. Analysts must make an assessment of prior probabilities, usually relying on a combination of intuition, experience, and past frequencies of occurrences. However, because of the complexity of variables involved, "one can seldom rely on historical frequencies alone" (Jolson 1).

3. Forecasting (Prediction) Aids

Bruce Bueno de Mesquita is perhaps the most well-known political decision forecasting analyst. Mesquita's models are not publicly available for complete review, but in a series of published books, he has revealed his general concepts and methodology. According to Mesquita, the general steps he uses to model decision forecasting are (2009):

1. Identify every individual or group with a meaningful interest in trying to influence the outcome.
2. Estimate as accurately as possible what each player says they want.
3. Approximate how important the issue is to the player (salience).
4. Approximate, relative to all other players, how influential each player can be in persuading other players to change their position (influence).

Using this basic setup, Mesquita models the decision-making landscape in considerable detail, including any entity or individual thought to be able to influence the situation. Because Mesquita's model is not publicly available, it is unclear what method he uses to represent the system being modeled. In any case, Mesquita, while controversial to some, has built a reputation for accuracy. In a declassified study, the CIA found that Mesquita's model predicted future events with double the accuracy of its CIA analysts (*New York Times*, 12 December 2009).

Decision and Game Theory are parametric approaches toward forecasting decision making under uncertainty. But there exist nonparametric approaches as well. One such approach is the Delphi Method, developed by the Rand Corporation in 1969 (Dalkey 1969). The Delphi Method uses the concept of "group knowledge" or "group opinion" to flush out uncertainty (Dalkey 1969). It does this by seeking to address the vast space of information that lies between fact (assertions supported by clear and convincing evidence) and speculation (assertions with no evidence). The space between is composed of opinion

(assertions where evidence is unclear or mixed) and this is where the Delphi method uses the "n heads are better than one" principle to aggregate information to form more reliable knowledge (Dalkey 1969). The idea is that there is at least as much credible information present with n opinion as there is with one opinion. On the other hand, the same can be said about misinformation. So the technique for gathering the information from "n heads" must be carefully considered (Dalkey 1969).

The process for information gathering is as follows: 1) anonymous response, 2) iteration and controlled feedback, and 3) statistical group response (Dalkey 1969). Anonymous response allows experts to provide opinions freely and removes the effects of dominant individuals. Iteration and controlled feedback allows the experts to review the (anonymous) answers of the group and update their response (Dalkey 1969). Research suggests that after iteration, the group opinion converges toward the correct answer (the first round median) and dispersion of error becomes smaller (Dalkey 1969). Statistical aggregation, the third and final step, of the group response ensures that all information gathered from the group is contained in the final presentation.

On judgments of value, the Delphi Method results are less clear. According to Rand, the Delphi Method appears to work well for estimating factual information but has far less power when estimating value judgments (Dalkey 1969). This is clearly a limitation in the context of decision analysis since most decisions worthy of study require, at least implicitly, judgments of value as well as judgments of fact. Additionally, the Delphi Method is an experimental design rather than a modeling process. In this sense, it does not allow for structuring the decision space or the system under analysis. Nonetheless, the Delphi Method has useful applications in decision analysis for its ability to provide a framework for estimating uncertainty.

Another technique that is growing in popularity focuses explicitly on the prediction of future events. Prediction markets are exchanges that are established to facilitate the exchange of futures contracts where "payoffs are tied to the outcome of future events" that someone has an interest in predicting (Wolfers and Zitzewitz 109). Wolfers and Zitzewitz show how prediction markets have proven able to approximate probability distributions on the outcome of future events (Wolfers and Zitzewitz 114). As in traditional markets, prices

in these prediction exchanges "reflect the assessments of (unbiased) profit motive" (Wolfer and Zitzewitz 118). Wolfewitz sums up the power of prediction markets:

> The power of prediction markets derives from the fact that they provide incentives for truthful revelation, provide incentives for research and information discovery, and the market provides an algorithm for aggregating opinions.

Like the Delphi Method, prediction markets do not directly address analysis of decision making or attempt to understand the nature of relationships within a decision-making system. However, in both cases, there are some obvious circumstances where the decision-making of an entity or an individual can be easily inferred from the probability assessment of the future event. A case in point is the probability distribution placed on Hillary Clinton being the Democratic nominee in 2008. Though she publicly denied she would run for nomination, market sentiment suggested that she was likely to win the nomination. The market had implicitly made a prediction that she would in fact make the decision to run (which proved accurate) and further concluded she was most likely to win (Wolfers and Zitzewitz 118-119).

Prediction markets are known to have many important limitations. Aside from the difficulty in developing and implementing them, they operate in aggregate and provide few insights into the mechanics of a decision-making system. From a prediction of highly aggregated information, it is unlikely that an analyst could easily untangle questions of correlation and causation to get at the factors driving the decisions or outcomes. Prediction markets also appear to perform poorly when probabilities are very small or are very near perfect certainty due to well-known human estimation biases (Wolfers and Zitzewitz 117). Despite these limitations, however, prediction markets are increasingly becoming a useful forecasting aid for those who wish to predict future events and decisions.

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III. MODEL DEVELOPMENT

A. PURPOSE

This chapter develops the conceptual framework for two models designed to answer the subject questions. Recall, the research questions are:

- *How would Lebanese Hezbollah respond to an Israeli strike against Iranian nuclear facilities?*
- *Under what conditions would Lebanese Hezbollah retaliate for the death of Imad Mughniyah?*

Additionally, for each question, a conceptual model is developed that fully articulates the required relationships to model the system under analysis. Finally, the actual implementation of each model is presented. Genie does not implement temporal influence diagrams nor does it implement multi-agent influence diagrams, each of which is a required capability for the subject questions. For both models, a Java application was developed to provide an interface between the decision analysis software Genie v2.0, Java, and Microsoft Excel. This approach makes possible the implementation of temporal and multi-agent behavior. Genie is used to construct the models and to input the data. Microsoft Excel is used to read in arguments necessary to run the application. Java is used to link these programs and exploit the capabilities Genie does offer. The application uses jSmile (Java API for Genie) and jExcel (Java API for excel). This application is hereafter referred to as STANA (STakeholder ANalysis Application). There are differences between the conceptual models and the implemented models. Wherever these differences exist, it results from the underdevelopment of the application used to execute the models.

This chapter presents a variety of figures and diagrams. Each model is attended by a significant number of probability and utility tables, only a small number of which are shown. Should the reader be interested in viewing the notional data in for all probability tables, they are included on file with this thesis in the NPS archives in a file

called STANA.zip. This file contains the programs and files necessary for model execution and a sample scenario for each model, complete with the probability tables used in this analysis.

B. CONCEPTUAL FRAMEWORK OF THE GENERAL MODEL

This thesis analyzes two separate but related questions so two separate models are developed. The first model addresses the question: How would Lebanese Hezbollah respond to an Israeli strike on Iranian Nuclear facilities? This model is referred to as the "LH-IS" model. The second question is: Under what conditions would Lebanese Hezbollah retaliate for the death of Imad Mughniyah? This model is referred to as the "LH-Mughniyah." Both models have similar structure. As such, a single, generalized model is developed. Towards the end of this section, the two models are developed within the general framework, at which time the specificities of each model are discussed. Much of the data for this analysis is an interpretation of facts by this author based on the historical review and discussions with Unified Combatant Command personnel.

1. Model Elements

a. Stakeholders

The first step in building the general model is to identify key stakeholders. From Chapter I, a stakeholder is defined as any entity that plays a key role in the outcome of a military or political situation. By this broad definition, an unwieldy number of stakeholders might be justifiable. However, to manage model complexity, only the most pertinent stakeholders are considered. Within this set of stakeholders, they are further sub-divided into *Primary* and *Secondary* stakeholders. Primary stakeholders are those whose *influence* in the system is so critical that it is felt their decisions must be explicitly modeled to achieve valid results. Secondary stakeholders, on the other hand, are decision-makers whose *influence* is important enough to include, but whose influence is not deemed central, thus permitting representation as a random variable. The following paragraphs provide the basis for the presence and role of each actor in the model.

- **Lebanese Hezbollah (LH)**. LH is the central decision-maker to be analyzed. LH has a history of confrontation with Israel and is considered a terrorist organization by the U.S. Iran and Syria each have interests in LH, who is often believed to be a tool by which these actors exercise regional influence. Conversely, LH is supported politically, militarily, and economically by Iran and Syria and so their decision making is believed to factor in the positions of these two actors.

- **Israel (IS)**. LH's interests are defined in terms of its relationship with Israel. As a result, Israel's decisions and its reaction to LH decisions are of central import to this model. Israel is a long-time ally of the U.S. and long-time opponent of Syria and Iran. Israel is likely to consider the position of each of these three actors when it takes its decisions.

- **Islamic Republic of Iran (IR)**. Iran was integral to LH's emergence and it is generally believed that Iran continues to play a central role in LH's decisions. Iran is believed to be the most important source of funding for LH operations and seems to have continuing influence in many of Lebanon's Shi'a dominated areas. Iran is certain to be influential to LH decision making, but it will also influence Israeli decision-making under many circumstances (i.e., threat of attack). Finally, given the standoff between Iran and the U.S. over nuclear weapons, Iran and the U.S. decisions have mutual dependencies, and may even be viewed as a separate but related strategic game.

- **The United States (U.S.)**. The U.S. has been a key ally of Israel throughout Israel's history. It is believed that any decision taken by Israel will necessarily be a factor in U.S. decision making. The U.S. is the premier power broker in the Middle East. Any decisions taken by the U.S. will have influence on all other actors in the region, even if only indirectly.

- **Syria (SY)**. Though Syria officially withdrew its troops in 2005, Syria has territorial and political interests in Lebanon and is generally viewed as exercising considerable influence in Lebanon. Israel and Syria have a long history of conflict and regional disputes and so each affects the other's decision-making. Syria also has interests

related to the U.S. as it potentially stands to gain economically should it engage diplomatically with the U.S. On the other hand, as a key logistics link between Iran and LH, and given the regional influence of Iran, Syria is not likely to be eager to openly embrace the West.

b. Stakeholder Interests

Each stakeholder has interests. An interest could be any issue or concern where the actor feels that it has some stake in the outcome. An interest could be defined in terms of the stakeholder, such as LH's desire to maintain its own militia capability, or could be defined in terms of another actor, such as Israel's desire for Iran NOT to have nuclear weapons. What is important for this definition is that the issue is salient to the stakeholder and the stakeholder possesses both capability and intent to take decisions to influence its outcome. The list below briefly describes the interests for the two primary stakeholders.

Lebanese Hezbollah

- Relevance and Influence. LH's terminal interest is to exist as a relevant and influential organization whose primary goal is to represent the Shi'a and pro-Syria political constituencies. It also seems to place value in extending its influence to broadly represent the Lebanese population. To the extent that LH maintains a strong militia, protects the Shia, and provides credible deterrence against Israel, it seems likely it will remain relevant and influential in Lebanon.

- External Support. LH currently benefits from strong support outside of Lebanon via Iran, Syria, and the Lebanese Diaspora. LH's actions will determine the extent to which this support continues, strengthens, or degrades. Should LH lose these external supporters, it will become more and more likely that LH could become less relevant as Lebanon's resistance force and will lose domestic political influence within Lebanon. So it is in LH's interests to maintain strong relationships with these external actors and organizations.

- Protecting Shia. One of two fundamental pillars of LH's organizational charter, LH's ability to provide protection to the Shia population in Lebanon has always been and remains a core source of its power and influence (Norton 2007). The term 'Protect' is meant to encompass both safety and welfare of Shia.

- Strengthening Militia. As a non-state actor, LH does not have unlimited access to government resources and instruments of national power. Its primary instrument of influence has been its military capability. LH has significant interests in maintaining a strong militia capability to enable it to achieve all of its other goals and interests. LH has shown considerable determination in maintaining its militia against both internal and external pressure to disarm.

- Resisting Israel. LH's status as the bearer of the ideological mantle of resistance is a source of relevance, influence, and credibility. Presumably, LH's resistance status would be seen as strengthening or weakening in proportion to its ability to credibly deter Israel, foster a sense of insecurity in Israel, foment anti-Israel sentiments at-home and abroad, etc. This interest may imply that LH needs Israel for its own relevance. It may also imply that LH's relevance could degrade over time if peace persisted between Israel and Lebanon.

Israel

- Improving Security. Since the birth of Israel, its chief concern has been to achieve a secure existence. Security, as it is meant here, implies that potential adversaries lack either the capability or the intent to bring harm to Israel and its interests. For Israel to have a secure existence, actors of means must not have malicious intent, and actors of malicious intent must not have the capability to threaten Israel or impede the quality of life of its citizens (i.e., economic hardship, etc). Even actors who do not have significant military capability can present a threat by advocating terror, fomenting violence against Israel, or harnessing international opinion in a manner that runs against peace and prosperity within Israel.

- Regional Stability. Instability in the Middle East always carries with it the potential for the rise of radical elements trumpeting populist messages. These populist messages are often anti-Israeli in nature so that the change that results from political instability is generally not in Israel's best interest. Political turmoil and instability also provides the opportunity for the rise of violent extremists who often gain prominence at Israel's expense and who often carry out acts of terror against Israel, its government and/or its citizens. In most situations, Israel does not benefit from the sudden change that comes from an unstable region. However, there are other conceivable scenarios where Israel may not desire stability. For instance, a stable region under a rival power—e.g., Iran—could be counter to Israel's interests, possibly inducing Israel to instigate instability—e.g., an attack on Iran or a key partner. Regional stability then is a context-specific variable and Israel's ordering of preferences should account for this.

- Political Survival. Since Israel transfers power through an election process, Israeli decision makers must account for the political ramifications of their decisions. This interest is necessary to represent the vulnerability inherent in the "will of the people" for a democratic nation.

The realization of an interest is some value (from a discrete set of values) that an interest variable may take on. For clarity in reference, the set of possible realizations of a variable is termed a *factor* of that variable. For instance, LH could have an interest variable called Relevance. The possible factors of which could be 'LH Relevance Improving' and 'LH Relevance Degrading'. Notice the 'ing' suffix for each factor. This characterization is used to ascribe a concept of direction to each interest. The main reason for this is to ensure validity of all interests over the desired time horizon. By prohibiting an interest from actually being achieved, it guarantees the integrity of the model. Suppose Iran had an interest in being a nuclear-armed nation and its interest factors were 'Uranium Enriched' and 'Uranium Not Enriched'. This factor description causes Iran's nuclear interest to become fixed and changes the nature of the model adding unnecessary complexity. To avoid this issue, all interest factors will be considered as direction toward a goal without the goal ever having been achieved.

c. Objective Function

Since each stakeholder has multiple interests (or multiple objectives), careful treatment of the objective function is required. The easiest approach to the objective function is to use an Additive Linear Utility (ALU) function, summing across all weighted interests and then maximizing that function. However, this approach is undesirable because it assumes linearity in relationships between interests. In reality, stakeholders tend to be willing to make trade-offs between certain interests considering the overall combinations and not just the sum of individual variables. Often, though not always, this leads to preference ordering that is non-linear. Figure 1 shows the interests of LH on a factor tree where each level of the tree corresponds to a single LH interest. The branch at each interest shows the two relevant factors for that interest. A leaf (red text) is interpreted as the combination of all interests up-root of that leaf. The leaf with the red box around it is the combination of these interest factors: Protecting the Shia, Strengthening Militia, Resisting Israel, Defending Lebanon, and Failing to Control Lebanon. The green number below the red text reflects U.S. beliefs about LH's preference for that specific combination of interest factors.

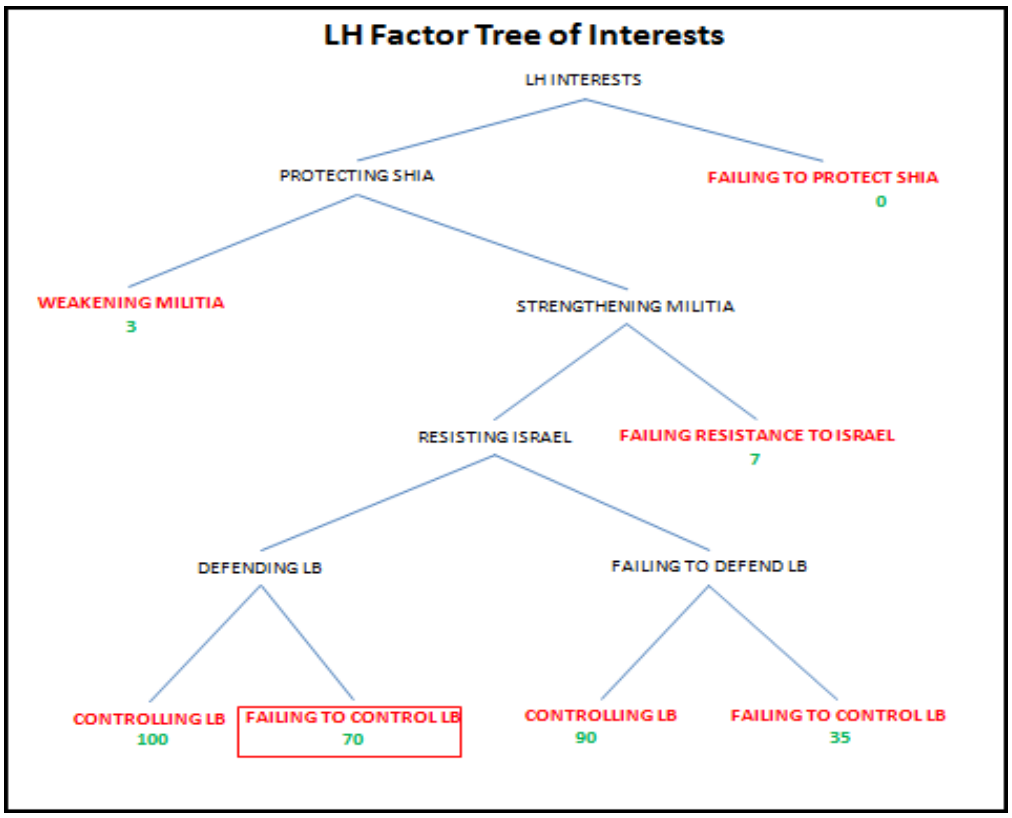

Figure 1. LH Factor Tree of Interests developed in coordination with Unified Combatant Command.

As can be seen from Figure 1, there are areas where preferences are non-linear. For instance, LH has interest in being considered the "Defenders of Lebanon" (Defending LB), but would be willing to sacrifice that interest for control of Lebanon through the political process (Controlling LB). Likewise, failure to protect its core supporters in the Shia population (Failing to Protect Shia) is the worst-case scenario for LH regardless of what other interests it achieves. This occurs because LH's most fundamental duty as an organization is to protect the Shi'a population in Lebanon. If LH does not succeed in this area, the realization of any other combination of interests has no effect on the utility values assigned to that branch of the factor tree. A simple summation would miss this important distinction. In scenarios like this where an interest factor dominates all other interests the tree appears "pruned"—i.e., where it seems that some

combinations are not represented. The main value of using the factor tree is it allows the analyst the ability to consider interests as conditional dependencies instead of considering each as its own independent entity.

d. Stakeholder Actions

Each primary stakeholder has a set of feasible actions that it can take. The stakeholder will take decisions that optimize its own expected utility based on its own interests. To the extent the primary stakeholders' interests are opposed, the actors will be in conflict. Conversely, to the extent that two actors' interests are aligned, they may have the opportunity for cooperation to achieve shared goals. Appendix A provides a complete description of the set of actions for LH and Israel, as developed in coordination with Unified Combatant Command.

Primary stakeholder decisions are the main focus of this thesis research. They are modeled explicitly in the LH-IS model so the user can analyze each decision by each stakeholder in each time period. In the influence diagram, decisions are represented by square nodes. Each node represents a type of action for that stakeholder, such as 'Military' or 'Diplomacy.' Within each decision node, there must be at least two choices—such as 'attack' or 'no attack'—but there may be an arbitrary number. Figure 2 shows a single decision node for LH along with two other nodes. The arrows emanating from the decision node indicates that the chance node depends probabilistically on the action taken. An arrow entering the decision node reflects temporal information. Specifically, the stakeholder has knowledge of the outcome of the chance node at the time he takes his decision.

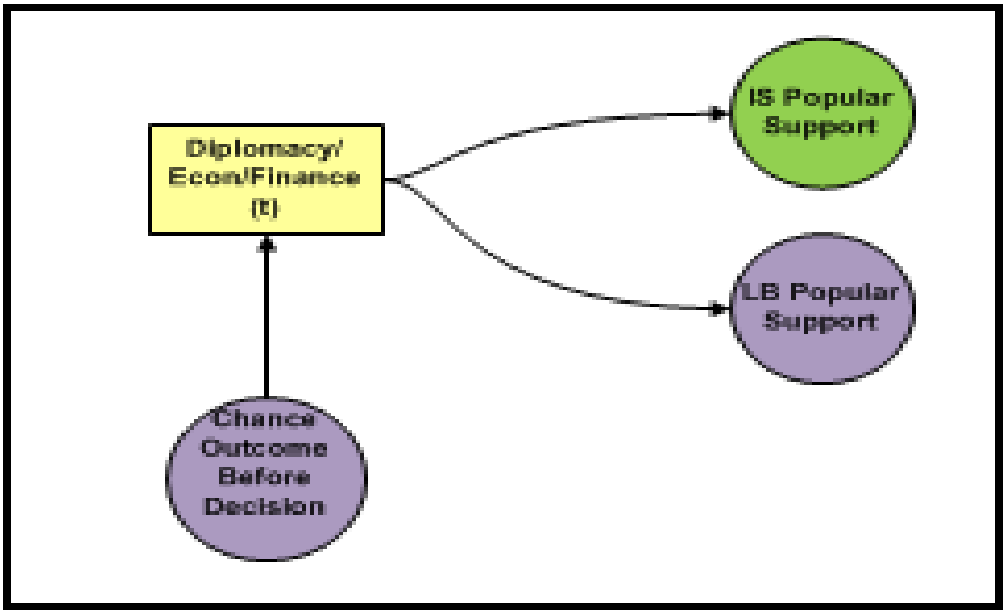

Figure 2. Interaction of chance and decision nodes.

e. Actions Criteria

Depending on context and level of model resolution, the combination of feasible actions can be overwhelming. To attempt to capture every possible action in every possible circumstance will lead to a model so complex that it either becomes infeasible or produces results that are too uncertain to be credible. On the other extreme, by not capturing the essence of the decision space, the model can become so simplistic that it fails to meaningfully represent the problem. The goal is to define stakeholder actions in a way that strikes the right balance between these extremes, where the essence of the decision space is captured and actions of negligible consequence are removed. The following criteria provide a framework to aid in selection of appropriate actions:

- Feasibility. The action must be one that the decision maker has the means to carry out with a reasonable probability of success.

- Relevant. An action must have a meaningful impact in the context of the system modeled. An action is considered relevant if all three of the following conditions are met:

- Consequence. The action is judged to have the potential to meaningfully affect one or more interests of one or more stakeholders.

- Unique. An action is unique if the action's results are not duplicated by any other action. Two actions can differ in what they affect and by how (or how much) they affect. If two candidate actions impact the same variables to the same degree, they are not unique.

- Time Relevance. Finally, all of the above criteria must be viewed and judged both feasible and relevant over the time horizon for analysis. Some decisions may be feasible and relevant over a long period of time (long-term strategic decisions) but may fail one or both of these criteria when considered over the model's time horizon. For instance, Israel could decide it wanted to rebrand its global image. To do this is a long, complex process that would take some years to accomplish and probably many more to evaluate its outcome. This action would be feasible but irrelevant in the time horizon of interest. There is one distinction to be made here. In some cases, an action may become infeasible due to the way the circumstances in the model scenario evolve. These cases do not violate time relevance. It is reasonable that the context of a situation may impact the feasible actions available.

2. Influence Diagram Representation of the General Model

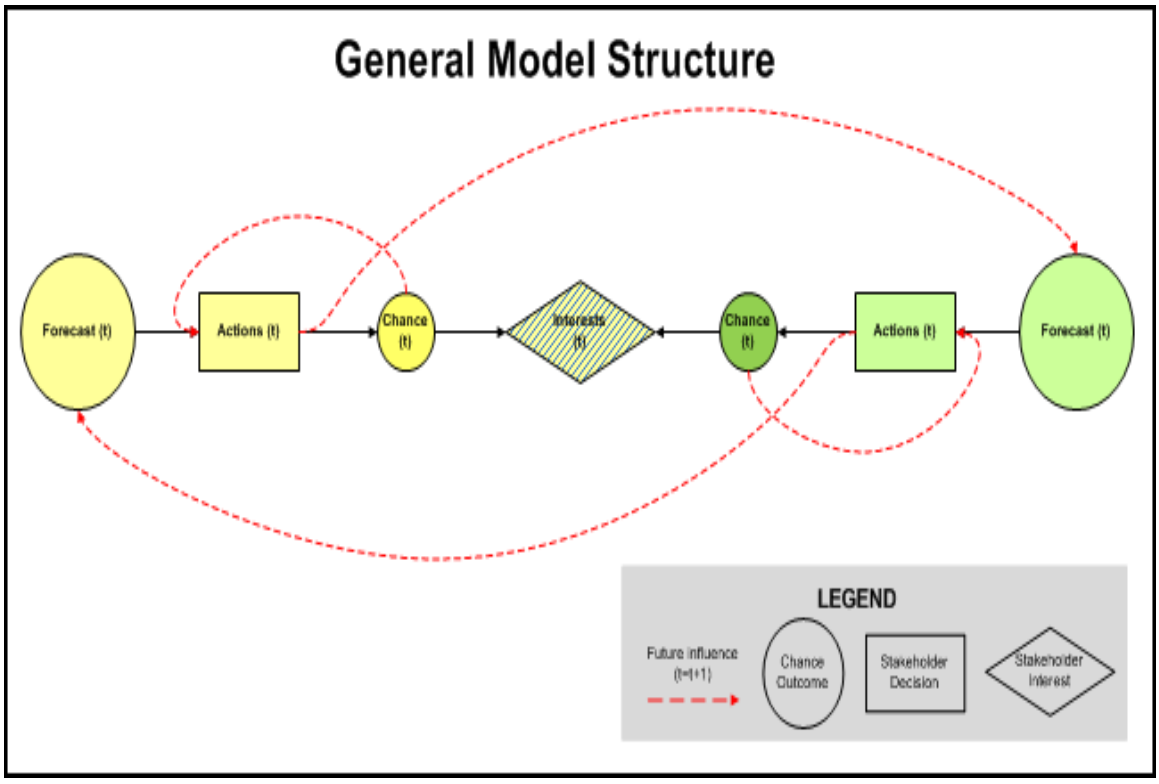

Figure 3. General Model Structure.

This general structure articulates the relationships between model components. The model components form the architectural framework for both models and are presented below. Black arrows in Figure 3 show dependencies that occur in the current time period. For instance, a stakeholder takes his action with knowledge of forecast. The red, dotted arrows represent a temporal dependency. For example, the red, dotted arrow emanating from Actions(t) to Forecast(t) means that Forecast(t=t+1) depends probabilistically on the Actions(t=t).

- Forecast (t). The decision-making process for the stakeholder begins with his forecast of what his opponent has recently done. It can also account for the forecast of what the stakeholder believes his opponent will do in the future. This forecast node represents the uncertainty around his opponent's decision-making context and any

uncertainty not explicitly represented by a chance node. This is for conceptualization, but is not been implemented in either of the presented models.

- Actions (t). Each time step, each stakeholder will take an action from a set of actions (see Appendix A for full listing) based on his *experience*. Experience, as it is defined here, is the result of the forecast (a function of past opponent decisions) and past realization of chance. Given his *experience*, a decision maker will select the action that maximizes his expected utility. The concept of experience implies learning. However, it has not been implemented in either of the presented models.

- Chance (t). Chance refers to the uncertainty that is present in the system. A good forecast and the optimal action can sometimes lead to a poor outcome. Chance is conditioned by the actions of both stakeholders. Notice that there are two separate Chance(t) nodes. This is because the uncertainty in the system differs for each stakeholder.

C. DEVELOPMENT OF THE MODELS

This section presents the conceptual development of the LH-IS model, implementation of the LH-IS model, and setup and implementation of the LH-Mughniyah model. The conceptual model is the blueprint, and the implemented models are the result of the efforts completed during this thesis to fulfill that blueprint. The gap between the conceptual model and the implemented models is pointed out during this section. Additionally, the LH-IS and LH-Mughniyah models are nearly identical in their basic structure. So the conceptual model is developed only for the LH-IS model, but its concepts should be understood to apply to both models.

1. Conceptual Model

Keeping the general model framework in mind, the full version of the LH-IS model is developed. As a reminder, the LH-IS model is developed specifically to answer this question: *How would an Israeli strike on Iranian nuclear facilities affect LH decision making?*

This question is approached by developing the general model by adding a more realistic representation of the chance component in order to calibrate a model that plausibly represents the current decision-making system. Once established, a "shock event" is introduced into the model to represent the occurrence of an Israeli strike. This allows model users to gain insight into the change that occurs between the pre-strike system and the post-strike system. Figure 4 shows the full influence diagram representation of the LH-IS model.

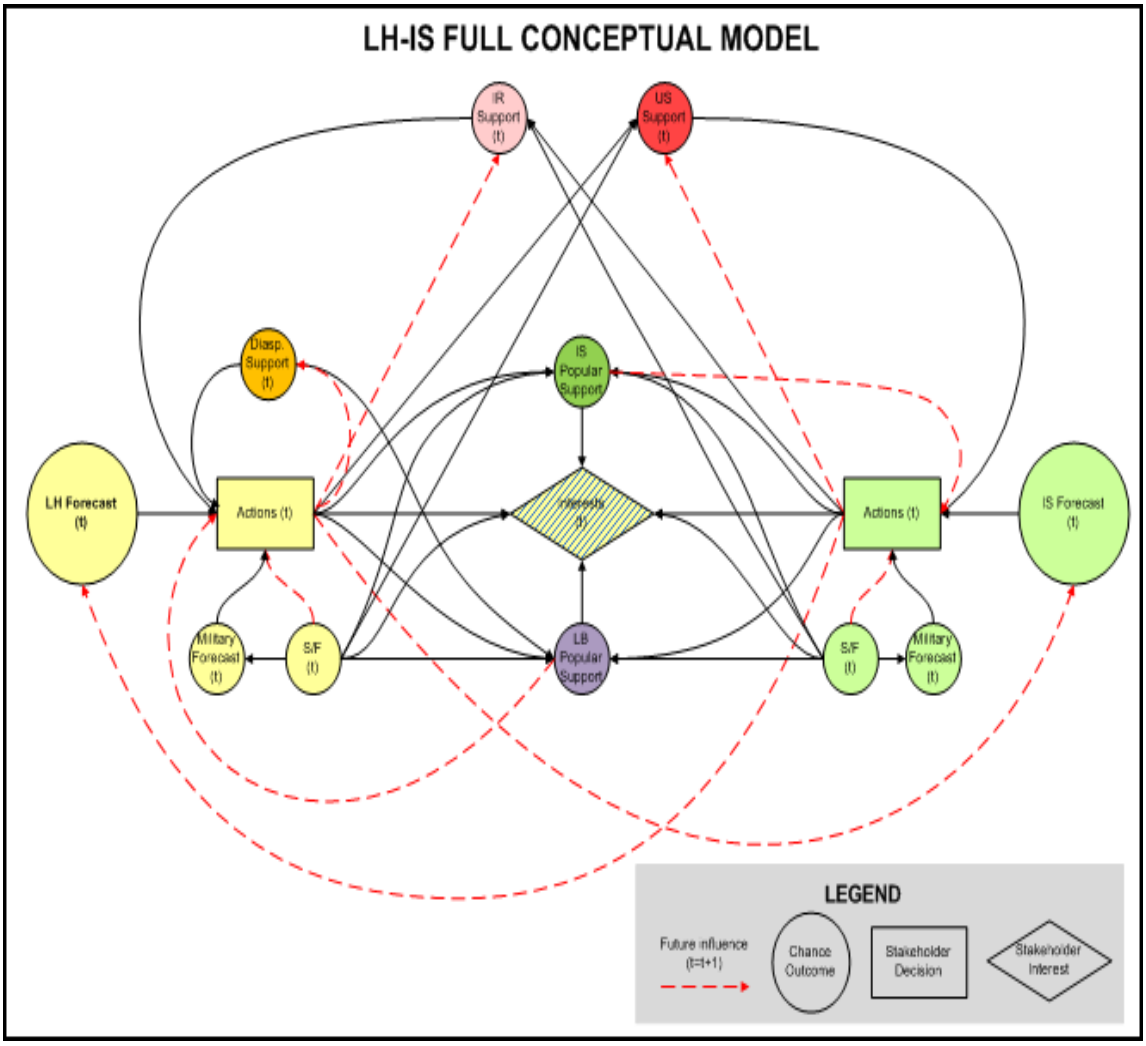

Figure 4. LH-IS Full Conceptual Model.

a. Military Decision Component

Military decisions require special treatment because of the nature of uncertainty that characterizes military action. When an actor chooses to take a military action, there is a high degree of uncertainty relating to the nature and degree of effects that result. Both the nature and degree of effect of a military action depend on whether or not the action was successful. Success here is defined in terms of the extent to which a military action achieves desired ends, irrespective of whether the action was successfully executed.

The problem for decision makers is that they have no way of knowing the true probability of success for a given operation. They must rely upon intelligence and forecasts from military experts. This is the Military Forecast(t) node, which provides a probabilistic forecast of success. The forecast is imperfect, but it can be assumed there is some knowledge of the uncertainty of the forecast. For instance, it may be known that in the past when a military operation was successful, success was predicted, say, 80% of the time. Mathematically, this is:

$$P(\text{Forecast Success} \mid \text{Military Success will occur}) = 0.90 \qquad (1)$$

$$P(\text{Forecast Success} \mid \text{Military Failure will occur}) = 0.30 \qquad (2)$$

If a decision maker is able to make the probability assessments in (1) and (2), then using Bayes Theorem, the decision maker can make an inference regarding the true underlying probability, given the intelligence signal received. Figure 5 shows a simplified diagram of this component with only one chance variable involved. The full version of the model contains influences on multiple chance variables and the interest nodes (refer to figure 4). It should be noted that this Military Forecast(t) component has not been implemented in the presented models, due to programming complexity.

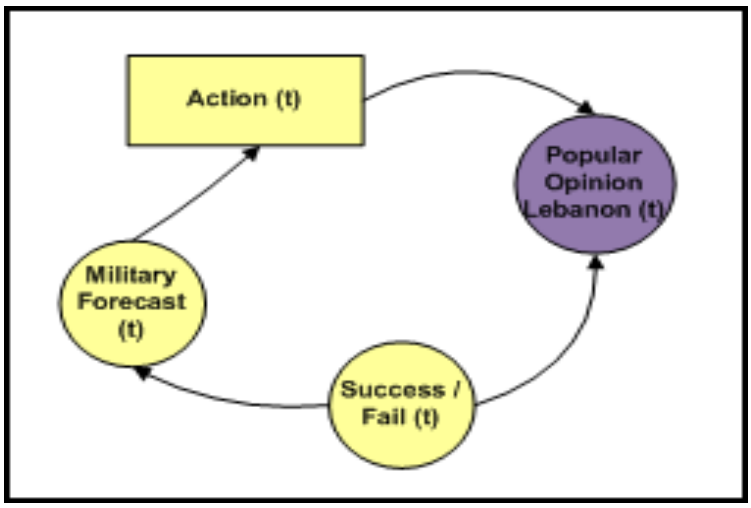

Figure 5. Military Decision Component of the Conceptual Model.

The diagram in Figure 5 is an influence diagram representation of the Military Decision Component. Figure 6 shows the same component in its corresponding decision tree form.

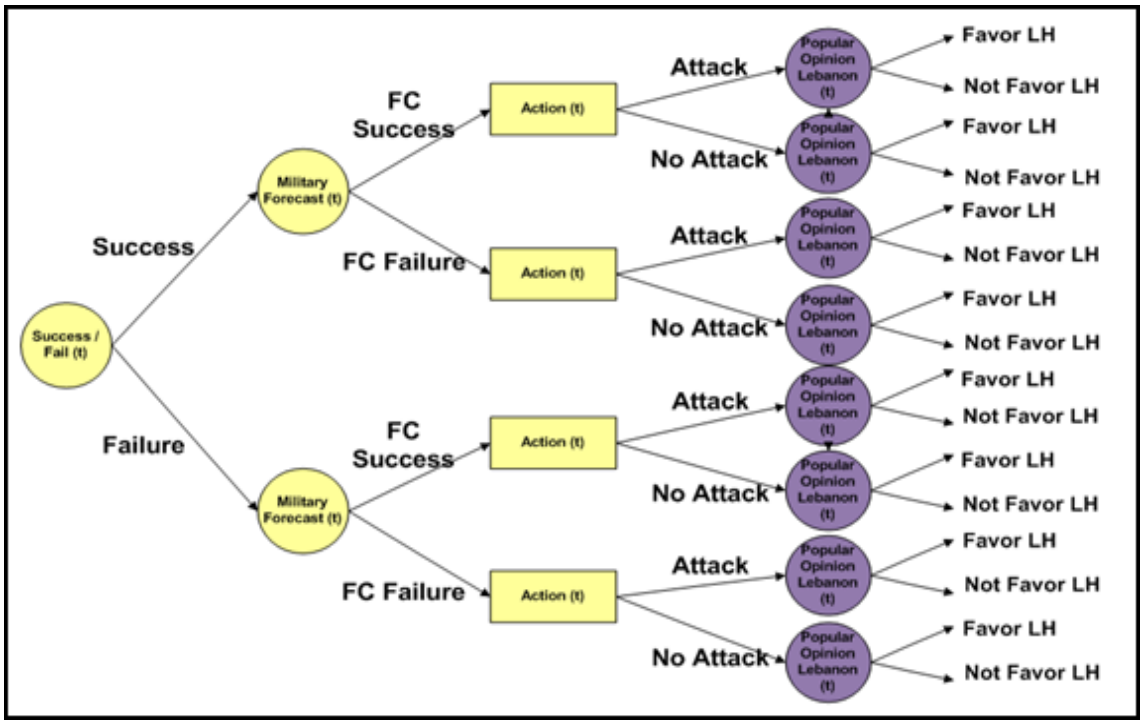

Figure 6. Decision tree representation of the Military Decision Component.

Reading from left to right: the Military Forecast depends probabilistically on the inferred prior probability of success, given forecast of success or failure, calculated using Bayes Theorem. The action is taken with full knowledge of the Military Forecast. The probability of Lebanese Popular Opinion being favorable or unfavorable to LH depends on the action that LH takes.

b. Diaspora Component

The Lebanese Diaspora component contains Lebanese Diaspora, LH actions, and the Lebanese population. According to Unified Combatant Command, the Lebanese Diaspora provides financial and political support to LH in two ways. First, LH receives direct funding and political support through charitable organizations and pass-through entities established for this purpose, as indicated by the solid black arrow from the Diaspora to LH actions. Second, Diaspora support flows into the Lebanese population, who subsequently allocate a portion of those resources to political entities of their choice. To the extent that the population supports and approves of LH's actions, presumably a degree of that support will then be allocated to support LH operations. This relationship is represented by the solid black arrow from Diasp Support(t) to LB Popular Support combined with the dotted red arrow from LB Popular Support to Actions(t). To complete the component, the level of Diaspora support is conditioned by recent LH actions. This is represented by the dashed red arrow from Actions(t) to Diasp Support(t).

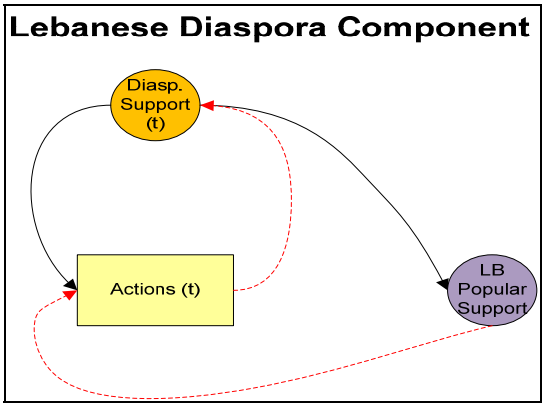

Figure 7. Lebanese Diaspora Component.

c. Uncertainty and Actions

Actions by LH and Israel influence the way chance occurs in the system. There are two basic forms of chance represented in this system. The first is endogenous. That is, uncertainty that is primarily inherent within and between the two primary stakeholders. This uncertainty is represented by Popular Opinion Lebanon/Israel (t). This captures the fundamental link between these two decision-makers and their constituencies, on which they rely to maintain power and influence within either Lebanon or Israel. The second type of uncertainty is exogenous and is meant to represent the uncertainty associated with how secondary stakeholders (e.g., U.S. and Iran) influence and are influenced by the decisions of LH and Israel.

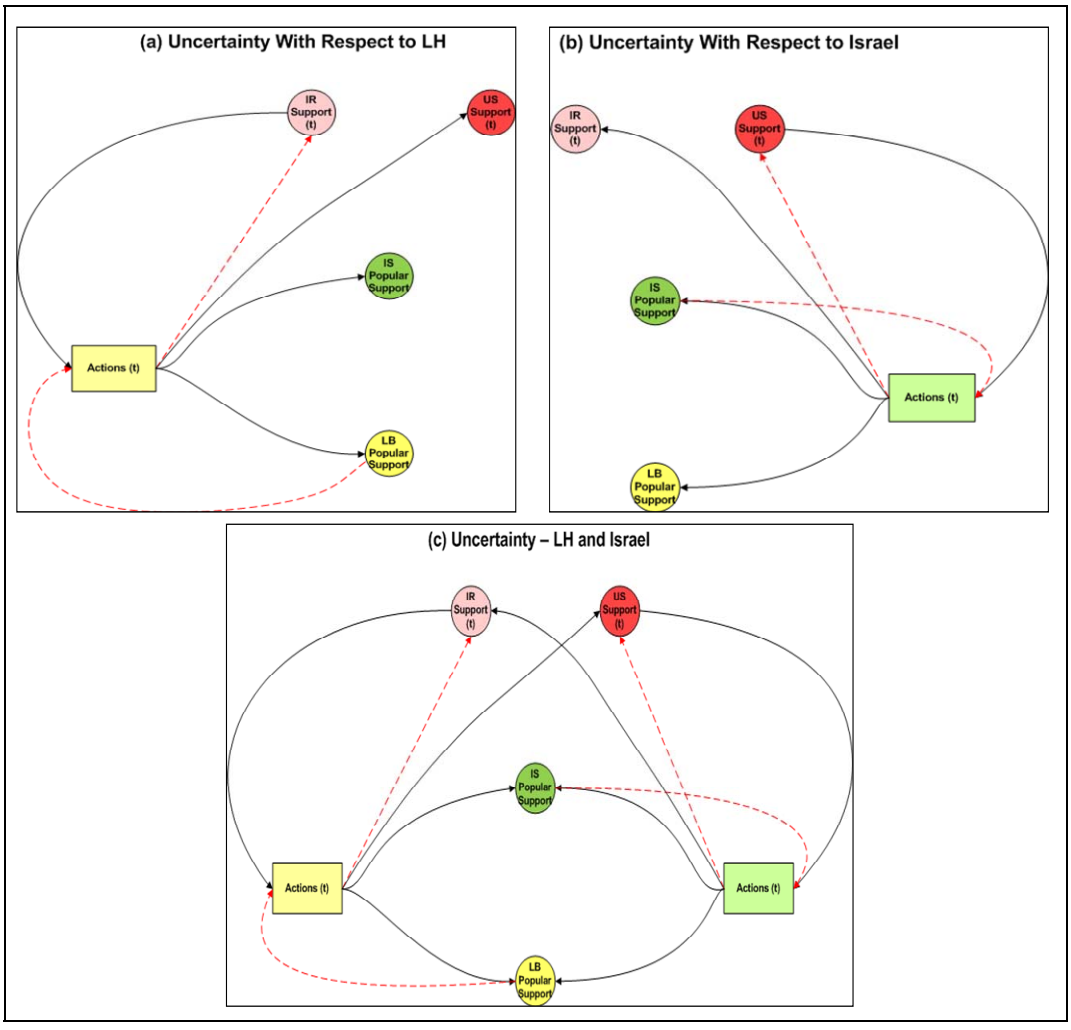

Figure 8. Uncertainty components: (a) LH, (b) Israel, (c) LH and Israel.

d. Uncertainty With Respect to LH

Figure 8(a) shows how popular opinion in both Lebanon and Israel depends on actions taken by LH. Additionally, LH takes future actions with information about the population stance in the previous time period. Figure 8(a) also shows that U.S. and Iranian support depends on LH actions. In the case of Iran, there is a mutual dependency. Iran's position (as read from its probability distribution) impacts how LH views its decisions. In turn, how LH reacts to Iran's position (by the actions they take) impacts the level of Iranian support.

e. Uncertainty With Respect to Israel

Figure 8(b) shows how popular opinion in Israel and Lebanon depend on actions taken by LH. Additionally, Israel takes future actions with information about the population stance in the previous time period. It also shows that Iranian and U.S. support depend on Israel's actions. In the case of the U.S., there is a mutual dependency. As in LH's case, the U.S. position impacts how Israel views its decisions and, in turn, U.S. support depends on the decisions Israel takes.

f. Combined Uncertainty Model

Combining the two uncertainty models adds a contextual dimension to the uncertainty. The Israeli population at a given time has either a favorable or unfavorable view of its leadership. If Israeli leaders take decisions that the population approves of, naturally that support will either improve or degrade. But the population's reading (and approval or disapproval) of Israeli decisions will surely be influenced by its view of LH's actions as well. For instance, if LH chooses to assassinate (and is successful) an Israeli leader and Israel's action is to cooperate diplomatically with LH and its partners, it is likely that popular support for Israeli leadership will begin to decline. The same dynamic exists with the external actors of Iran and the U.S. If Israel chooses to cooperate diplomatically with LH, the U.S. might become very supportive of Israel. But if LH is conducting terror attacks inside Israel, it is likely that the U.S. would remain supportive

even if Israel became aggressive. On the other hand, Israel becoming aggressive without provocation might induce the U.S. to become less supportive. This dynamic is modeled mathematically as:

$$P(\text{Strong Population Support} \mid \text{LH Action, IS Action}) \qquad (3)$$

2. LH-IS Model Implementation

Section 1 developed the conceptual version of the model. This section presents the implementation of this model using the Genie v2.0 user interface.

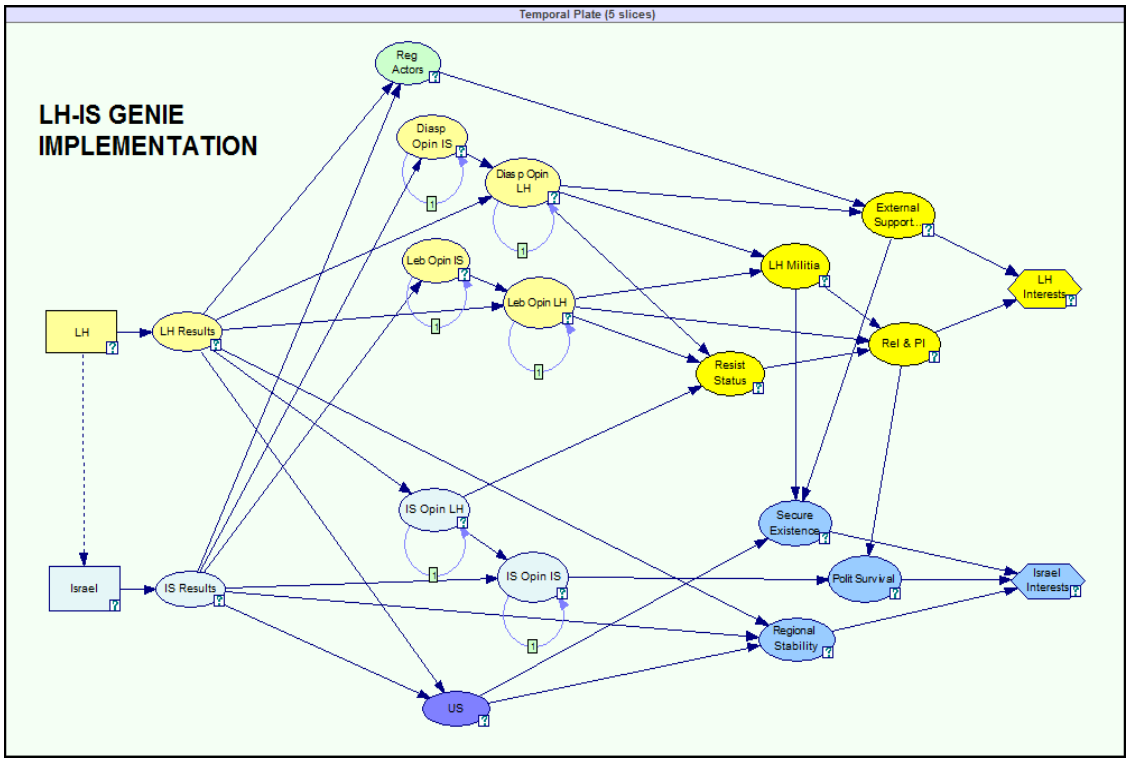

Figure 9. The LH-IS model implemented in the Genie v2.0 user interface.

Figure 9 displays a screenshot of the LH-IS model implemented in the Genie v2.0 user interface. Using Genie, everything about the model can be changed to include variables, influence relationships, probability distributions, and temporal influences.

There are limitations with the current Java application that runs the model, however. Appendix B is a user's guide for STANA that describes how to setup and run the program. It also points out model limitations.

The model is set in Genie on a temporal plate. This allows for the specification of "normal" (non-temporal) and temporal arcs. Temporal plates in Genie do no support temporal influence diagrams. However, specifying them using this Genie feature allows STANA to read the diagram as a temporal diagram and exploit that information. The multi-agent version of the program supports only Genie diagrams set inside temporal plates. The single player version (not addressed in this thesis, but included in the software) allows non-temporal diagrams.

The following paragraphs discuss each component of the implemented model, primarily addressing areas where the implemented model appears different from the conceptual model.

a. Decision Component

Each stakeholder has one decision with two available choices: attack or cooperate. STANA is not currently equipped to handle multiple decisions, or more than two choices within a decision node.

LH and Israel decisions are taken sequentially. In this case, LH moves first and then Israel. The turn sequence is shown by the arrows between the decision nodes. The black dotted arrow means that Israel takes its decision with knowledge of LH's decision. The light blue dotted arrow indicates that LH takes its decision in time t+1 knowing Israel's decision at time t. This sequence repeats for the number of time steps specified by the model user (time steps entered at the top center of the temporal plate).

LH and Israel's decision nodes influence a "results" node. The results node has three outcomes: success, failure, and cooperation. Success and failure outcomes represent probabilities associated with military action (e.g., the attack decision). The third outcome is a probability associated with the cooperative action. As modeled, if LH or Israel choose 'cooperative', the Results node is deterministic with probability equal to

1 that the result is a cooperative action. This, of course, does not necessarily have to be the case. Users could certainly model the probability of success or failure for a diplomatic-type action.

b. Uncertainty Component

The uncertainty component in the implemented Genie diagram functions exactly as it was intended in the conceptual model. In the conceptual model, there was a single chance node that represented the U.S., Iran, the Diaspora, Lebanese Population, and the Israeli Population. In Figure 9, however, the popular opinion nodes have each been broken down into subcomponents. For example, the Diaspora now has an opinion of LH and an opinion of Israel. The final value of interest is the Diaspora's opinion of LH, which is described as a function of its opinion of Israel, its opinion of LH, and how it felt about each stakeholder in the previous time period. While this adds nodes to the model, the functionality of the nodes remains the same. The additional break down of these nodes simply provides a more tractable way to enter data into Genie, since it doesn't require the user to consider as many conditional dependencies. Figure 10 shows a sample of each of the Diaspora opinion nodes. Were these two nodes combined as they were in the conceptual model, all possible combinations would be enumerated in a single probability table, making data entry unnecessarily difficult.

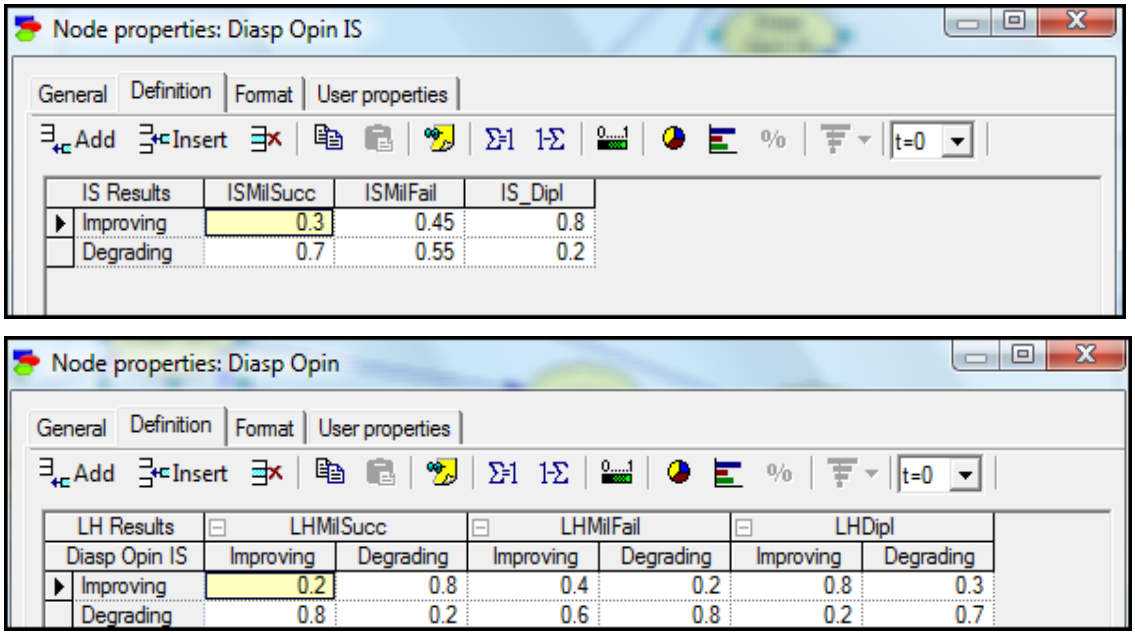

Figure 10. Example of probability table in Genie v2.0, using Diaspora as an example.

c. Interests Component

LH has a variety of interests, as has been discussed. However, during modeling it became clear that some interests are terminal, meaning that they seem to be the most basic needs. Other interests appear to be more accurately represented as objectives to achieve the terminal interests. With this idea in mind, the primary stakeholders' interests became a probability sub-model that attempts to capture these interdependencies. Figure 11 is a replica of the original diagram, but highlights the interest components for the two primary stakeholders. Note the interdependencies within a stakeholder's set of interests and interdependencies between the two stakeholders. For instance, if LH strengthens its militia, this will likely influence Israel's sense of security.

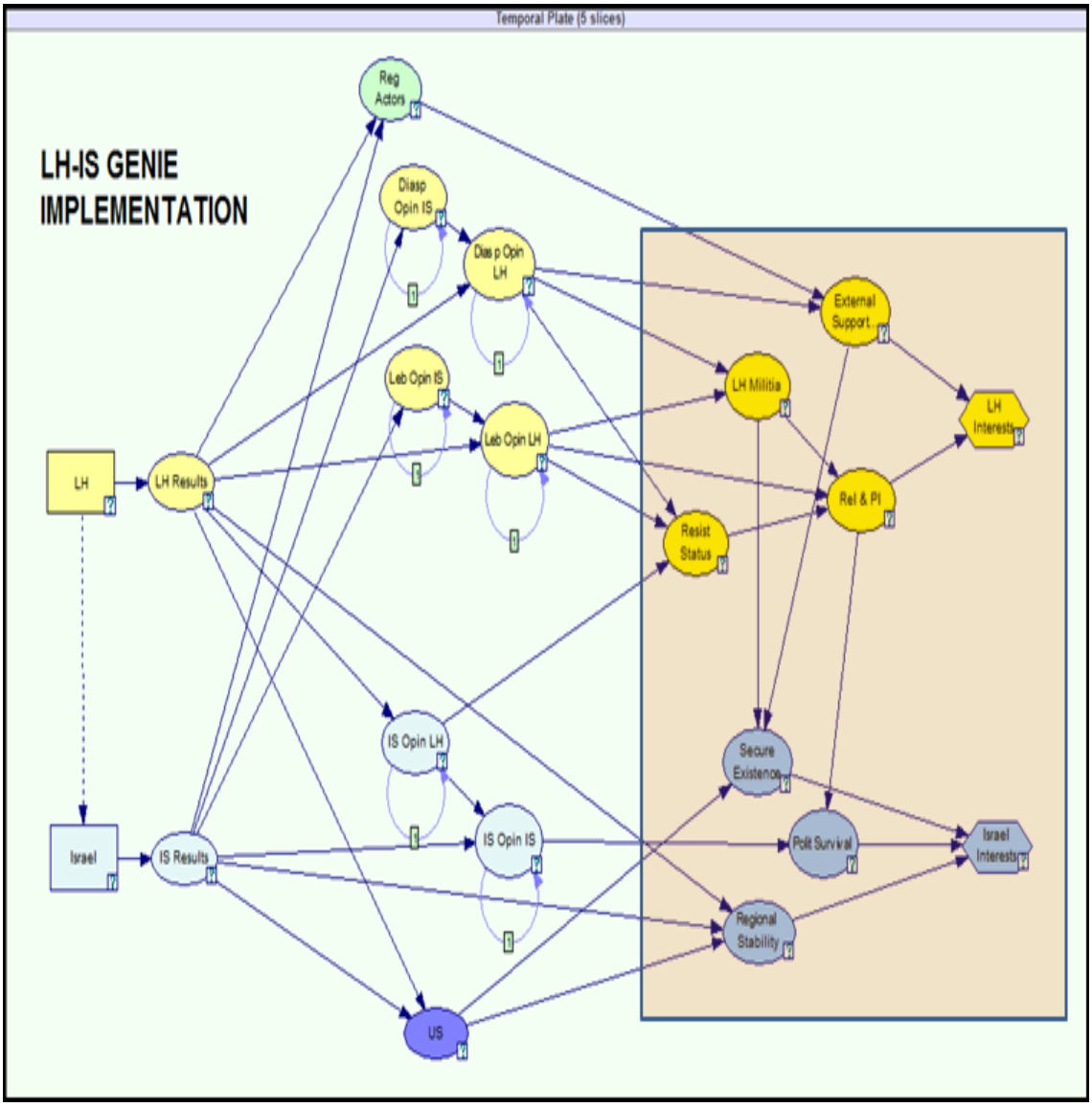

Figure 11. LH-IS Genie implementation focusing on stakeholder interests.

3. LH-Mughniyah Model Setup

The LH-Mughniyah model conforms to the conceptual model presented for the LH-IS model. This section focuses on problem setup for the LH-Mughniyah model. This model differs from the LH-IS model mainly in the sense that it seeks an understanding of conditions that would induce a given decision, where the LH-IS model seeks to understand how a shock event will change the decision-making calculus. Recall

that the the LH Mughniyah model is developed to gain insight on this question: *Under what conditions would LH retaliate for the death of Imad Mughniyah?*

a. Background

Imad Mughniyah, a leading terror operative of LH through the 1980s and 1990s, was assassinated in February 2008. Though it has not been confirmed, LH believes this assassination was conducted by Israeli operatives working in Damascus where the assassination occurred. LH leadership has vowed revenge for this assassination, but two years have passed and still no retaliation attempt has occurred. So, the question for this model is centered on gaining insights as to why the avowed retaliation attempt has not occurred, which may shed light on the circumstances that would prompt LH to fulfill its promise.

To analyze this question fully, it is first necessary to define exactly what is meant by 'retaliation' and what kind of actions should be perceived as retaliation. Retaliation, according to Merriam-Webster, *is to return like for like; especially, to get revenge*. To break this down further in the context of LH's political situation, the following assumptions are made as to what constitutes retaliation:

- Like-for-like. This implies that whatever potential retaliatory act LH takes, it must be perceived to atone for the injury inflicted on LH as a result of Mughniyah's assassination. The act itself could be of almost any nature (i.e., assassination of Israeli leader, high acts of international terror, etc.). The importance though is that the act must be able to be interpreted by both the Israelis and the Lebanese as having "settled the score." This point distinguishes retaliation from general armed aggression that is typical of relations between LH and Israel

- Revenge. Revenge implies that the relevant observers within Lebanon and Israel must believe LH perpetrated the attack. The fact that an Israeli leader is assassinated or an Israeli high value target is attacked does not necessarily constitute revenge by LH, particularly if it is determined conclusively that LH is not the perpetrator of the attack. So the element of revenge requires at least a reasonable degree of certainty

that LH either directly affected the attack or masterminded and instigated its execution. This does not mean that LH agents actually have to carry out the attack. It could certainly be executed by a proxy terror group or individual acting under LH direction, support, financing, etc.

Having established what it means to retaliate, it is necessary next to define LH's interests in the context of this question. Earlier in this chapter, a series of interests were defined that reflected LH's strategic interests. The LH Mughniyah model, however, is narrower in scope. As a result, LH interests are also defined more narrowly to be consistent with model context. Interests for this model are defined as:

- Retaliating for Mughniyah's Assassination. LH has vowed to take revenge for Mughniyah's assassination. They have an interest in keeping this promise.

- Relevance as Lebanon's Resistance Force. LH must remain relevant as the Lebanese resistance force against Israel. If LH becomes irrelevant, it loses support for an independent militia, may become marginalized as a political organization, and could potentially lose its position as the voice of the Lebanese Shia.

- Political Influence inside Lebanon. LH is not the only organization inside Lebanon that advocates on behalf of Shia or anti-Western sentiments, and it is especially not the only organization that advocates on behalf of the Lebanese population in general. However, it has become the official resistance force, largely due to the political clout that it has been able to obtain over the past few decades. LH is currently the leader of the pro-Syrian political faction and is considered the voice of opposition to Israel and the West. Should LH be marginalized as a political organization, it loses the ability to achieve its more strategic objectives because of lack of popular support. So it is in LH's interest to seek political influence within the Lebanese political process to serve the Shia and anti-Western causes.

- External Support. LH currently benefits from strong support outside of Lebanon via Iran, Syria, and the Lebanese diaspora. LH's actions will determine the extent to which this support continues, strengthens, or degrades. Should LH lose these

external supporters, it will become more and more likely that LH could become less relevant as Lebanon's resistance force and will lose domestic political influence within Lebanon. So it is in LH's interests to maintain strong relationships with these external actors and organizations.

Considering LH's political interests, there are a number of reasons why LH would desire and benefit from fulfilling its promise of revenge for Mughniyah's death. There are also many reasons why delay or abstention would make sense. The next section addresses the reasons for and against a retaliatory attack, in each case relating these reasons to LH's domestic political interests.

b. Reasons LH Might Decide to Retaliate

LH has vowed and clearly desires to retaliate in-kind for Mughniyah's death. Below are believed to be the reasons they desire to do so. It should be noted that these desires are likely to increase or decrease based on how secure LH feels in its base of support. It may be more likely to want to show strength and resolve if it feels it is being viewed as weak, which could be measured by an eroding base of support. Conversely, if LH's support base is growing, it is likely that LH would not feel compelled to demonstrate strength and resolve sensing that peace and stability are more highly valued.

- Demonstration of strength. Since it is generally agreed within the Shia population (and perhaps Lebanon in general) that Israel assassinated a high-level LH operative, no response by LH might be perceived as weakness. Weakness in that LH could be afraid to provoke Israel or weakness in the sense that it lacks the capability to respond. This could possibly result in a lack of faith in LH as an organization, making them seem less *relevant* as a resistance force, reduce their *political influence*, and reduce *external support*.

- Demonstration of Resolve. Since LH leaders have vowed to respond, they may lose credibility by not doing what they have vowed to do. This imposes a cost to LH for waiting. Again, this could reduce *relevance*, *influence*, and *external support*.

c. Reasons LH Might Consider Delaying or Cancelling Retaliation

LH faces a number of risks when considering a retaliatory attack against Israel. Since retaliation implies a response-in-kind type of action, the response would surely be perceived as a terror-related action. This means that a retaliatory attack taken by LH would entail both *internal* and *external* political risks. These risks form the reasons that LH may desire to delay retaliation, or forego it altogether.

- Internal Political Risk

1) Domestic Political Influence. As stated above, LH may be viewed as weak by not retaliating. On the other hand, resorting to terror runs the risk of reducing political support for LH within Lebanon, especially among non-Shia.

2) Israeli Retaliation. Conducting acts of terror would surely increase international support for an aggressive response by Israel, who could potentially use the political cover to occupy parts of Southern Lebanon. At best LH could receive internal pressure to disarm and forfeit political influence. At worst, a severe Israeli response could destabilize LH's position in Lebanon or even threaten its survival.

3) Lack of Opportunity. The opportunity for an appropriate respond-in-kind retaliation just may not have occurred to this point. Israel has a robust intelligence service that is not easily circumvented. Any retaliation attempt inside Israel would require an opportunity where, with a carefully planned operation, success would almost be assured. Were LH to attempt to retaliate, fail, and be implicated for the attempt, it could be disastrously embarrassing. LH would likely lose credibility, appear incompetent, and undermine its position in Lebanon.

- External Political Risk

1) Iran. Iran has shown over the past two decades the ability to limit LH desires to conduct terror attacks. At present, Iran is under tremendous pressure from the international community to discontinue its nuclear program. Because of the international community's strong belief that LH acts under the guidance of Tehran, Iran may perceive

the potential for the international community to become supportive of pre-emptive Israeli action against Iran or, worse for Iran, invite direct military confrontation with the U.S. If this is the case, Iran may attempt to constrain LH from using terror and violence to achieve any ends, including a retaliatory terror-type attack against Israel.

2) Syria. Syria also has interests in this matter for similar reasons. Any LH terror action that justified Israeli retaliation means that Syria becomes a potential pre-emption target for Israel. A severe provocation by LH could lead to simultaneous attacks against Iran to reduce their nuclear capabilities and pre-emptive strikes against Syria to prevent them from entering a conflict. Additionally, a confrontation with Israel runs a high risk that Syria remains isolated in the international community, as they are now. As such, Syria has good reasons to discourage LH from resorting to terror-type actions.

3) Diaspora. The Diaspora's opinion of LH could be degraded if LH were perceived internationally to have induced a backlash against the Lebanese population (by the war and strife that could follow). On the other hand, there are elements of the Diaspora that would likely punish LH for being weak in the face of Israel, by not seeking the revenge that LH has promised.

For LH to retaliate then, they must weigh the value of the decisions (as judged by its impact to their interests) against perceived internal and external risk. Essentially, LH must balance their desire for retaliation (strength and resolve) against the risks (internal and external) and make a calculation as to whether or not it serves its interests. Below are two *hypothetical* cases believed to mark the boundaries of the decision space.

d. Boundary Cases

LH must balance the cost of inaction against the cost of attacking. In general, the cost of waiting results from the possible erosion of support that could occur over time if LH is perceived too weak to attack Israel or too irresolute. On the other hand, LH faces internal and external risks should it decide to carry out an attack. Internal risks arise from uncertainty about how the Lebanese will respond to a provocation of

Israel, what Israel will do in response, and whether LH has an opportunity to execute the attack successfully. External risks arise from the level of support LH can expect to receive from regional actors such as Iran and Syria, how the Diaspora's support could be affected, and the extent to which the U.S. could become involved.

(1) Attack Case. In this case, LH perceives the cost of attacking as very low relative to the cost of waiting.

- Iran and Syria support LH action**.** Iran and Syria (for any number of reasons) have given LH a blank check to operate against Israel as they see fit. This means that LH feels they can count on political and military cover provided by these actors.

- Diaspora strongly supportive of LH, strongly opposed to Israel**.** International support is not favorable to Israel (perhaps due to issues related to Palestinians). The diaspora seems to increase its support to LH when LH takes aggressive action against Israel.

- U.S. only passively supportive of Israel. LH believes the U.S. has distanced itself somewhat from Israel and that because of potential direct conflict with Iran, the U.S. will not underwrite a full-scale military response by Israel. LH knows Israel is likely to respond, but believes they will be constrained in that response.

- Domestic Political Influence. Due to perceived inaction by LH, Lebanese could begin to see LH as failing to show strength against Israel. LH could sense they are losing their status as Lebanon's resistance and could come under fire for maintaining an independent militia, such as was the case preceding the 30-day war of 2006. LH could feel compelled to consolidate its base of support by showing strength against Israel or by provoking it.

- Israeli Retaliation**.** LH judges this risk as acceptable since the U.S. does not seem poised to intervene and both Iran and Syria are judged to be prepared to support LH's actions.

- Opportunity**.** An opportunity presents itself that will allow LH to retaliate while maintaining plausible deniability in the investigations that would surely follow. Though plausible deniability exists, observers on the ground in Israel and Lebanon will be reasonably sure that LH was behind the attack. LH will be able to exact revenge but with acceptable risk.

In the 'Attack' case, LH could demonstrate strength and resolve while improving their credibility as a resistance force, strengthening their political position, and maintaining strong ties with their external supporters. The 'Wait' case presents the theoretical worst case scenario for an LH retaliatory action.

(2) Wait Case. In this case, LH perceives the cost of attacking to outweigh the cost of waiting.

- Iran and Syria opposed to LH terror actions. Iran does not want to be seen as a sponsor of terrorist activity since it is within striking distance of achieving its nuclear ambitions. Syria is not interested in sparking a regional war, preferring to pursue economic engagement with the U.S. and the West. Both actors strongly advocate against LH aggression, and may even be inclined to publicly condemn LH's use of terror.

- Diaspora values peace and stability. While the diaspora remains supportive of LH and Lebanon in general, LH judges that any act that jeopardized peace and stability within Lebanon would be punished by a lessening of diaspora support. LH may still feel it can count on hard-line supporters, but generally view the diaspora as valuing peace in Lebanon over revenge against Israel.

- U.S. actively supporting Israel. The U.S. and Israel tied closely together and LH judges that any provocation would result in the U.S. providing as much cover as Israel needs to engage in a full-scale response.

- Domestic Political Influence. LH enjoys the benefit of broad popular support and judge that support is based on continued stability. LH judges that any action that changed the current state would result in a popular backlash that would undermine its political influence.

- Israeli Retaliation. Without political and military cover from Iran and Syria, and given the U.S. is not likely to constrain Israel, LH expects a full-scale conventional military response from Israel, which might even threaten LH's survival.

- Opportunity. LH cannot be sure that they can successfully execute a terror attack without being condemned by the international community. Since they do not have support of Iran and Syria and it seems that international opinion and opinion within Lebanon both strongly favor continued peace and stability. If LH were to be implicated as an instigator of conflict, they could risk their current political position within Lebanon.

This case is a theoretical worst case for a retaliatory attack. For one, LH has a lessened need to show strength and resolve because they enjoy broad support and aggression might seem too risky. Externally, the atmosphere does not seem to give LH reasonably assurance that Israel's response would be constrained, and they risk involving their external supporters in direct conflict with the U.S.

4. LH-Mughniyah Model Implementation

The last section developed the conceptual framework necessary to model the LH Mughniyah question. The two cases at the end of the last section marked the extremes of the scenario space. The section that follows takes these ideas and builds a model to allow the analyst to vary the parameters and explore the space between these extremes to help gain insights into Lebanese decision making and the conditions that would induce LH finally to attempt to take revenge.

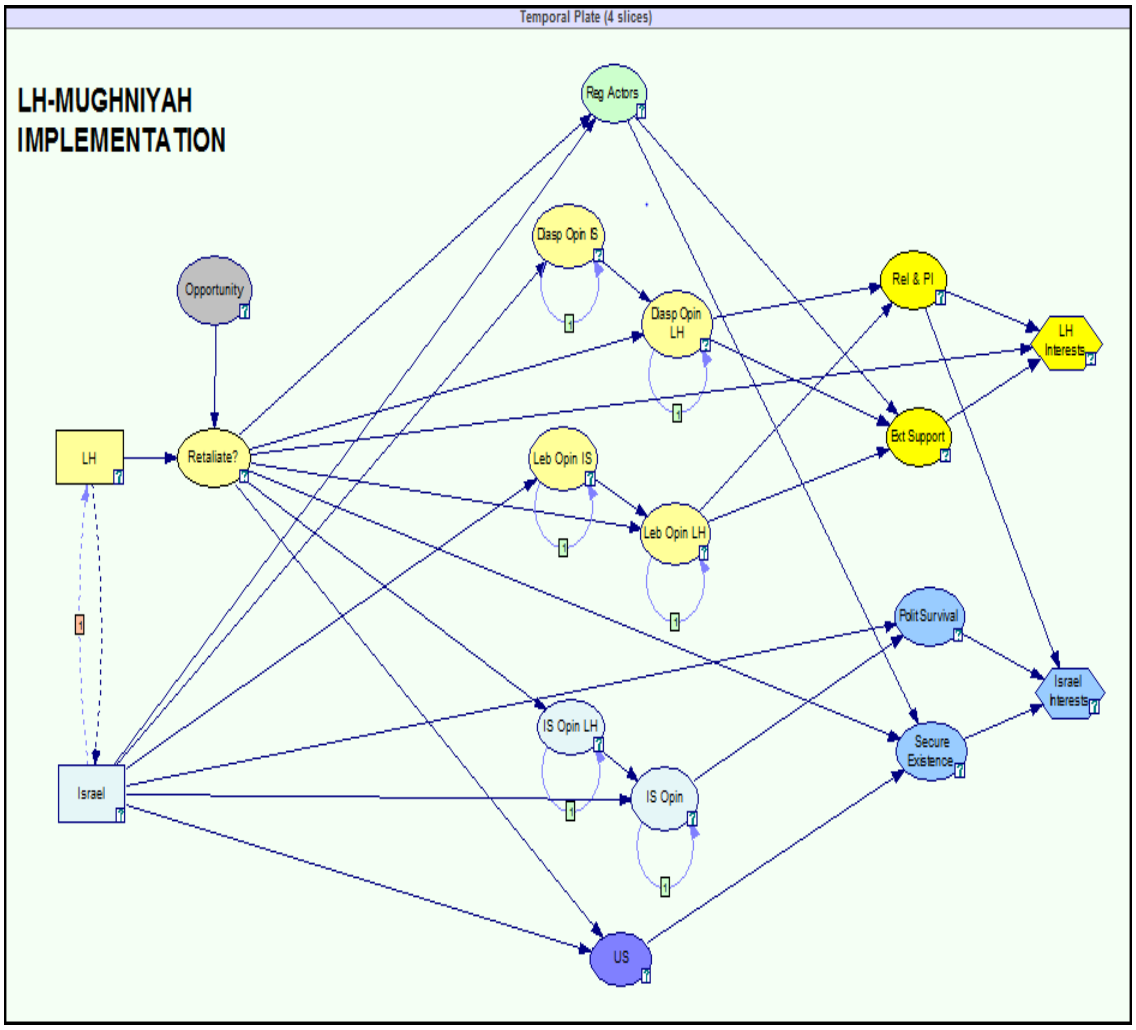

Figure 12. LH-Mughniyah model implemented in Genie v2.0.

The LH-Mughniyah model shares a nearly identical structure to the LH-IS model presented earlier. There are, however, some differences and they are addressed in the following section. The chance variables of the Diaspora, Lebanese population, Israeli population, and the external actors all behave the same as in the previous model, so they will not be revisited.

a. Decision Component

The decision setup is slightly different in this model. This model is specifically focused on the 'Attack' or 'Wait' decision of LH. LH's decision leads into a

chance node called ‘Retaliate?’. This node has three outcomes: ‘Succeed’, ‘Fail’, or ‘No Attempt’. Success here is defined narrowly. In this context, it means they succeeded in a manner where the Lebanon and Israel know LH did it, but they maintain a degree of plausible deniability (to the international community) in order to keep the likelihood of a full-scale Israeli response relatively constrained. Failure here means that LH has failed and they are caught and are known to have failed. Since obvious failure might call into question LH’s competence and credibility, it may have a cost that is worth exploring. Finally, the third outcome is ‘No Attempt’. This outcome is the result of a decision to wait, or the result of an attempt that has failed but the public is unaware of the failure.

Israel’s decision in this case is more abstract. Given LH’s decision, Israel has a choice to approach its response aggressively or passively. Aggressive response is meant to include a range of violence from limited military response to full-scale military response. A passive response is generally intended to mean something less than overt military action. However, it does not preclude lower level border skirmishes or covert operations aimed specifically at LH operatives or leaders. The intent with the passive response is that the Israelis and Lebanese would view Israel’s response as intentionally constrained.

An ‘Opportunity’ chance node has also been introduced into the model. The intent of this node is to consider whether LH could be induced into an attack if a good opportunity arose. In reality, the opportunity would be read by LH before the decision was taken. This component should use a forecast component similar to that discussed earlier in the LH-IS model. However, for the same reason it was not implemented in that model, it is not implemented here either. This is an admitted shortfall of the model as it currently stands.

b. Interests Component

This model has a narrower scope than the LH-IS model and the interest structure has been narrowed accordingly. As Figure 12 shows, LH and Israel each have only two interests. The interests that are present have the same interpretation and

meaning as they did in the LH-IS model. However, several interest variables have been removed. For LH, the following nodes are removed: Militia, Resistance Status, and Protecting Shia. It is judged that LH's militia and its ability to protect the Shia are not at stake in consideration of a retaliation strike. However, resistance status may still be at stake. But, since this model has a simpler structure, this model factors resistance status into the 'Relevance and Political Influence' interest node. In the case of Israel, the only interest variable that is removed is the regional stability node. Again, it is judged that regional stability is not likely to be appreciably influenced by a retaliation strike.

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IV. RESULTS AND ANALYSIS

A. PURPOSE

This chapter displays results from one of the models developed in Chapter III. Due to the similarity between the two model structures, only the LH-IS model results are displayed in this chapter. It should be noted, however, that the approach for using the LH-Mughniyah model will be exactly the same. The main purpose of this chapter is to demonstrate how these models can be used to help users gain insight into the subject questions and similar stakeholder analysis questions.

The approach taken is to calibrate the LH-IS model by developing a plausible "Base Case," which is intended to reflect the current state of the system as accurately as possible. The base case is developed under the assumption that both LH and Israel will continue to be non-aggressive now and into the future. Once the base case is established, scenarios are considered that induce one or both of the stakeholders to choose some sequence of actions, at least one of which includes an aggressive act. As with many modeling approaches, the value of what is presented here does not lie in the strict interpretation of the numerical output nor does it lie in the projected sequence of decisions. The real value lies in the process of developing the model and defining and understanding the relationships between variables that lead to the changes in output from one scenario to the next. To demonstrate this, the base case is modified to show two simple scenarios. The analysis of these two scenarios, in conjunction with the base case focuses on the different inputs and any differences in outputs that result. This thesis does not attempt an exhaustive enumeration of all possible combinations of model parameters, though this is a possibility for future work. Additionally, all data used to arrive at these results is notional and based on this author's best guess based on historical and geopolitical analysis and time spent talking to Unified Combatant Command subject matter experts. The data does not reflect the opinions of Unified Combatant Command, Department of Defense, Naval Postgraduate School, or anyone other than this author.

STANA is general enough to handle any competitive decision-making problem (subject to model limitations), simply by the way the user constructs the model in the Genie v2.0 user interface. The last section of this chapter is dedicated to discussing the capabilities and limitations of the models presented.

All scenarios are run for five time steps, though STANA is capable of longer time horizons. Since these models represent sequential games, it should be noted that the results will differ should the turn order be reversed. There appears to be a second mover's advantage to this model, as will be seen in the higher expected utilities for the second player in each case. Finally, where sensitivity analysis is concerned, it is conducted from the point of view of LH only, though the model has the flexibility to allow the user to select which player is the focus of sensitivity analysis.

B. LH-IS RESULTS AND ANALYSIS

The first scenario is the "base case." This is the author's best rendition of the current situation between these two stakeholders. Figure 13(a) and 13(b) shows model output for the base case. Figure 13(a) shows output when LH is first mover and 13(b) is the output when Israel is the first mover.

```
Two Player Game: LH and Israel

Time: 0, Player: LH Action: LH_DIPL
Time: 0, Player: IS Action: IS_DIPL
Time: 1, Player: LH Action: LH_DIPL
Time: 1, Player: IS Action: IS_DIPL
Time: 2, Player: LH Action: LH_DIPL
Time: 2, Player: IS Action: IS_DIPL
Time: 3, Player: LH Action: LH_MIL
Time: 3, Player: IS Action: IS_MIL
Time: 4, Player: LH Action: LH_MIL
Time: 4, Player: IS Action: IS_MIL

Final Utilities:
LH: 35.830181291848554, ISRAEL: 67.8463911095563
```

Figure 13(a). Eclipse output, LH first mover.

```
Two Player Game: Israel and LH

Time: 0, Player: IS Action: IS_MIL
Time: 0, Player: LH Action: LH_MIL
Time: 1, Player: IS Action: IS_MIL
Time: 1, Player: LH Action: LH_MIL
Time: 2, Player: IS Action: IS_MIL
Time: 2, Player: LH Action: LH_MIL
Time: 3, Player: IS Action: IS_MIL
Time: 3, Player: LH Action: LH_MIL
Time: 4, Player: IS Action: IS_DIPL
Time: 4, Player: LH Action: LH_DIPL

Final Utilities:
ISRAEL: 44.24696087006137, LH: 65.77753128595644
```

Figure 13(b). Eclipse output, Israel first mover.

In an infinite horizon game where LH moves first, LH always chooses cooperation over conflict. As the artificial timeline imposed by this model nears, the dynamics change and Israel decides to make a switch to conflict since it will not pay the penalty for provocation (this game has a 1-step temporal delay, the cost of conflict would not show up until t=5). Ignoring end of game effects, however, the base case is calibrated to ensure both players have reason to be constrained from conflict. The two cases that follow will be adaptations of this base case.

Also notice in Figure 13(b) that when Israel moves first, conflict will ensue. This also results from the end of game effect. The way the model is constructed, it is in LH's best interest to have the Lebanese have a hostile opinion of Israel. If LH moves last, it will find the sequence that leads Israel to attacking until the last time period, where LH will then switch to diplomacy gaining itself a repeatedly hostile Israel and then taking a sudden switch to being the "nice guy" in the last time period.

From running the base case with alternating first movers, it can be seen that there is a distinct second mover's advantage to this model. This is apparent from the expected utility differences, but also makes intuitive sense when considering model logic. Since backward induction solves these games, the second mover has the first choice due to the logic of the backward induction algorithm. This along with the fact that this model is

implemented with first order temporal dependency means that the last two periods of the game may behave differently than the rest. This is important to keep in mind when reading the output of these models.

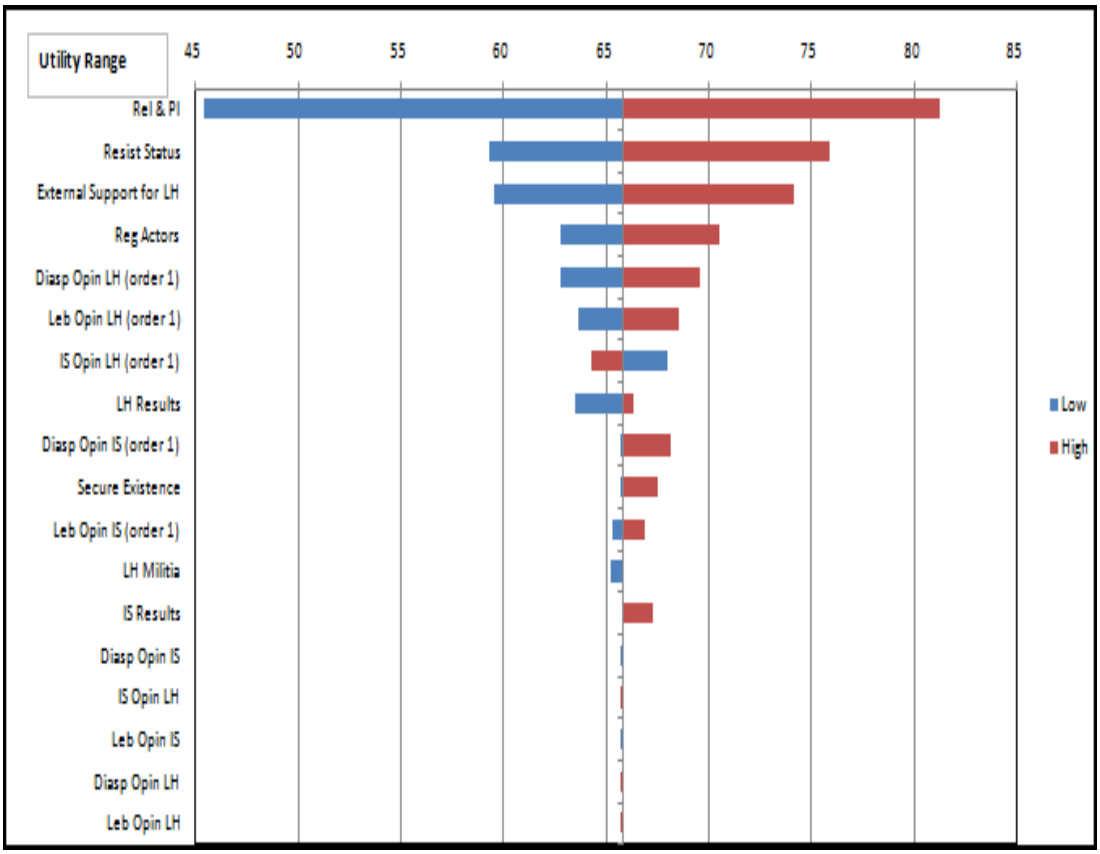

Figure 14. Base Case Tornado Diagram.

STANA is also equipped with the ability to automatically generate sensitivity analysis data. Essentially, it varies the probability tables between a "low" value and a "high" value. The low and high values are designated by the user when running the program. The user selects a number between 0 and 1 and the first outcome in each node is varied by this amount (the program ensures number remain between 0 and 1, regardless of what the user inputs). This automation provides the user the ability to quickly get a sense of which variables are driving the model (as in Figure 14), but has some limitations. When the program adjusts the variables, it does not account for the direction. This is why the "Low" value (blue bars) can appear above the red bars (high value). In

the case of "IS Opin LH," for instance, when the program shifts the value to its "low" estimate, it is actually forcing Lebanon's opinion of Israel lower, which is beneficial for LH's utility value. So, in this case, the "low" parameter estimate gives a higher final utility, thus the blue bar appears above the red. There is also a limitation that resides in the fact that some probabilities are already near 0 or 1. So, in some cases, varying a parameter up or down may seem to have very little effect. From Figure 14, it is difficult to tell which variables are negligible from those that sit on the boundary near 0 or 1. Usually, when the parameter starts near 0 or 1, its bar will lie almost completely to one side of the baseline.

The sensitivity analysis of the base case, from LH's point of view, shows that LH's interests are the key drivers of the model. This is not surprising, but should be held as a reminder to users that these variables must be carefully considered when employing the model. It is also clear that regional actors, the Diaspora, and Lebanese opinion significantly influence LH's utility value. Finally, LH's value appears to be somewhat sensitive to Israel's actions and its interests. Of course, as the probability tables are adjusted, many of these effects will change. However, in most cases, it is likely that the interests of the player in question will always be at or near the top of the tornado diagram.

1. Scenario 1: High Risk, High Reward

a. Setup

Adjusting from the base case, the first scenario probes the hypothetical case where the Lebanese and the Lebanese Diaspora reward LH for aggression if it succeeds and punishes it severely if it fails. The intent of this case is to consider what impact, if any, does LH's military capability (e.g., its success rate) have on its decision whether or not to be aggressive. Some other interesting possibilities for this case might be whether either Iran or the U.S., as external actors, will play a more significant role in constraining or encouraging either actor's behavior.

b. Results

Figure 15(a) and 15(b) shows a total of four cases under this scenario. The case displayed in Figure 15(a) is the case where LH has a high risk-high reward of attacking AND their probability of success is very high. The diagram on the left has LH as first mover, and on the right has Israel as first mover. Figure 15(b) shows the same scenario, except LH's probability of success is very low.

High Risk-High Reward, High Probability of Success. LH Moves First.

```
Two Player Game: LH and Israel

Time: 0, Player: LH Action: LH_DIPL
Time: 0, Player: IS Action: IS_DIPL
Time: 1, Player: LH Action: LH_MIL
Time: 1, Player: IS Action: IS_MIL
Time: 2, Player: LH Action: LH_MIL
Time: 2, Player: IS Action: IS_MIL
Time: 3, Player: LH Action: LH_MIL
Time: 3, Player: IS Action: IS_MIL
Time: 4, Player: LH Action: LH_MIL
Time: 4, Player: IS Action: IS_MIL

Final Utilities:
LH: 35.66181343446988, ISRAEL: 68.7887001023883
```

High Risk-High Reward, High Probability of Success. Israel Moves First.

```
Two Player Game: Israel and LH

Time: 0, Player: IS Action: IS_DIPL
Time: 0, Player: LH Action: LH_MIL
Time: 1, Player: IS Action: IS_DIPL
Time: 1, Player: LH Action: LH_MIL
Time: 2, Player: IS Action: IS_DIPL
Time: 2, Player: LH Action: LH_MIL
Time: 3, Player: IS Action: IS_MIL
Time: 3, Player: LH Action: LH_MIL
Time: 4, Player: IS Action: IS_DIPL
Time: 4, Player: LH Action: LH_DIPL

Final Utilities:
ISRAEL: 43.564615173944645, LH: 66.7367987573496
```

Figure 15(a). High Risk-High Reward, High Probability of Success for LH.

When LH has a high probability of success, they appear very prone to attacking Israel. If LH moves first, it can successfully provoke Israel into aggression and maintain a state of conflict. Again, this shows the fact that the model is setup to reward LH for provoking Israel into a state of hostility. On the other hand, if Israel moves first, Israel attempts cooperation and resists provocation, at least for a while. It is not entirely clear why Israel is less inclined to be provoked into conflict when it moves first, however, it is quite possible that they do not enjoy the political benefits of being the provocateurs, as LH does in this scenario.

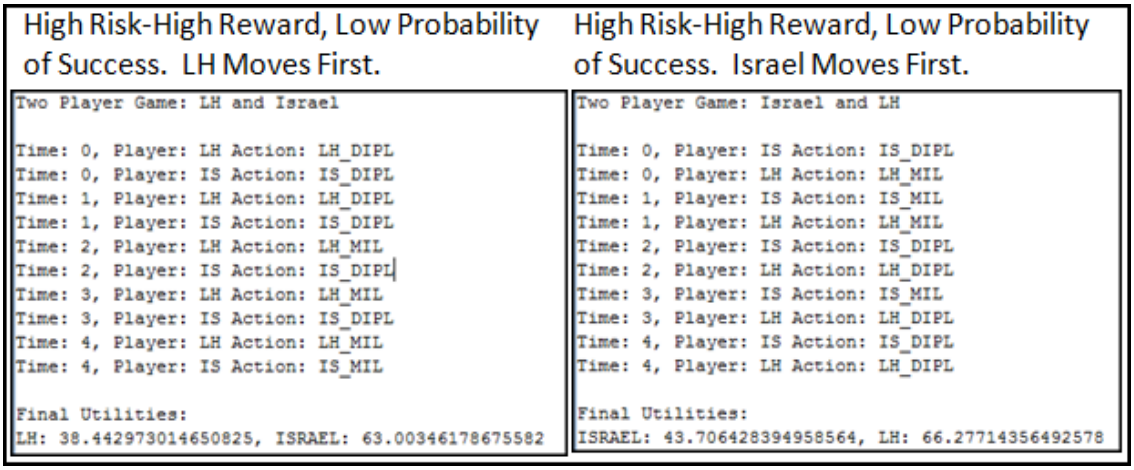
High Risk-High Reward, Low Probability of Success. LH Moves First.
Two Player Game: LH and Israel
Time: 0, Player: LH Action: LH_DIPL
Time: 0, Player: IS Action: IS_DIPL
Time: 1, Player: LH Action: LH_DIPL
Time: 1, Player: IS Action: IS_DIPL
Time: 2, Player: LH Action: LH_MIL
Time: 2, Player: IS Action: IS_DIPL
Time: 3, Player: LH Action: LH_MIL
Time: 3, Player: IS Action: IS_DIPL
Time: 4, Player: LH Action: LH_MIL
Time: 4, Player: IS Action: IS_MIL
Final Utilities:
LH: 38.442973014650825, ISRAEL: 63.00346178675582
High Risk-High Reward, Low Probability of Success. Israel Moves First.
Two Player Game: Israel and LH
Time: 0, Player: IS Action: IS_DIPL
Time: 0, Player: LH Action: LH_MIL
Time: 1, Player: IS Action: IS_MIL
Time: 1, Player: LH Action: LH_MIL
Time: 2, Player: IS Action: IS_DIPL
Time: 2, Player: LH Action: LH_DIPL
Time: 3, Player: IS Action: IS_MIL
Time: 3, Player: LH Action: LH_DIPL
Time: 4, Player: IS Action: IS_DIPL
Time: 4, Player: LH Action: LH_DIPL
Final Utilities:
ISRAEL: 43.706428394958564, LH: 66.27714356492578

Figure 15(b). High Risk-High Reward, Low Probability of Success for LH.

When LH's probability of success is low, they seem less inclined to provoke when they are first movers (though this does not hold throughout). When Israel moves first, it again appears that they have no interest in being the instigators of conflict, but can be induced by LH aggression. It is likely that the U.S. is constraining Israel from instigating, but the Israeli population overrides this constraint once LH attacks, though it is a close run issue.

c. Sensitivity Analysis

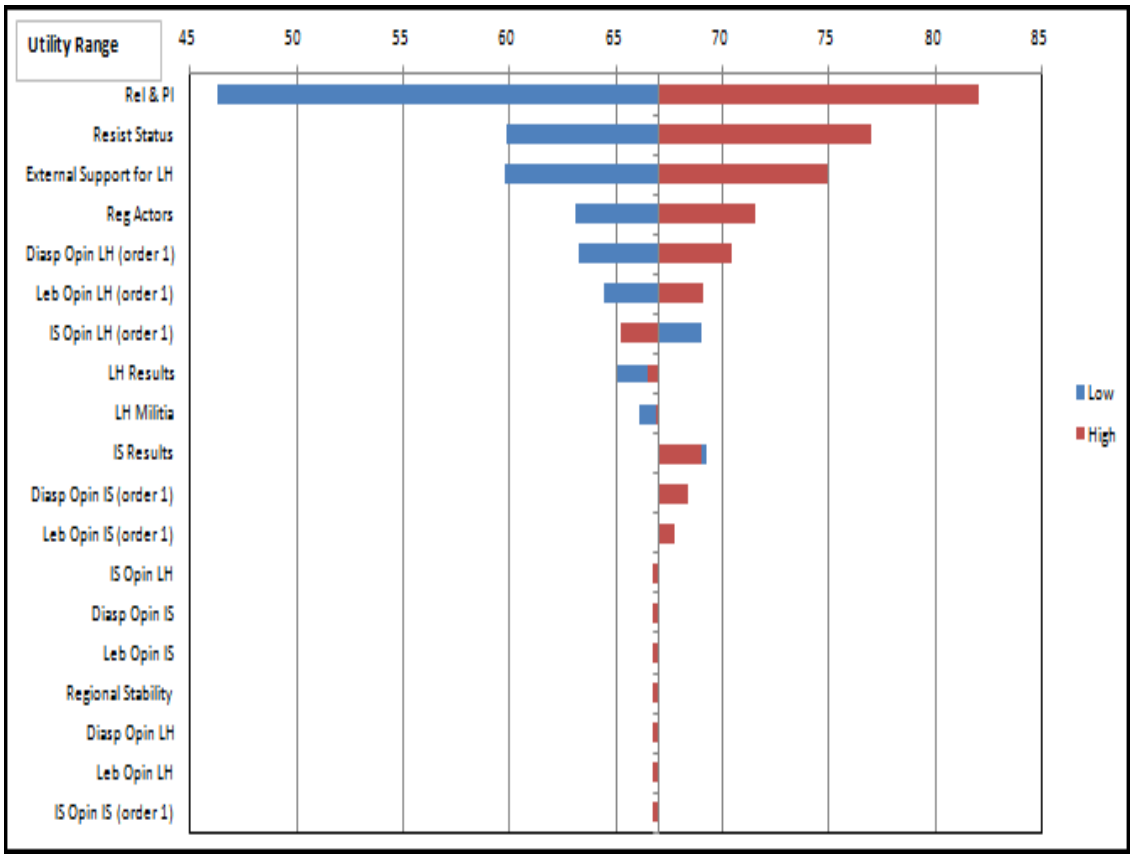

Figure 16. High Risk-High Reward, low probability of success for LH.

The first four variables remain ordered the same. Below that, there is some reordering that has occurred. In the base case, how the Diaspora and the Lebanese felt about Israel was consequential. In this case, however, these opinions were fixed at extreme values (near the 0, 1 boundaries) and so changing them has a much smaller effect on the model. The same can be seen with "LH Results." The range has narrowed because the probabilities were fixed near the boundaries. Generally speaking, though, the model observes few differences in the overall ordering of these variables.

2. Scenario 2: Israeli Strike on Iran

a. Setup

The final scenario for analysis explores the possibility of a shock to the system. In this scenario, Israel is set up to conduct a strike against Iran in the first time period. All probability tables are updated for Regional Actors (of which Iran is the main consideration) and opinions of the Lebanese and their Diaspora to reflect a hostile attitude toward Israel and to punish LH for engaging in diplomacy if Israel strikes Iran. This effect lasts until time period 2, when the scenario returns to normal. To force Israel's decision in the first time period, a deterministic node is added called 'Strike Iran'. 'Strike Iran' is set to 'yes' for the first time period and switches to 'no' in the second time period and remains that way throughout the game. Figure 17 shows the updated diagram.

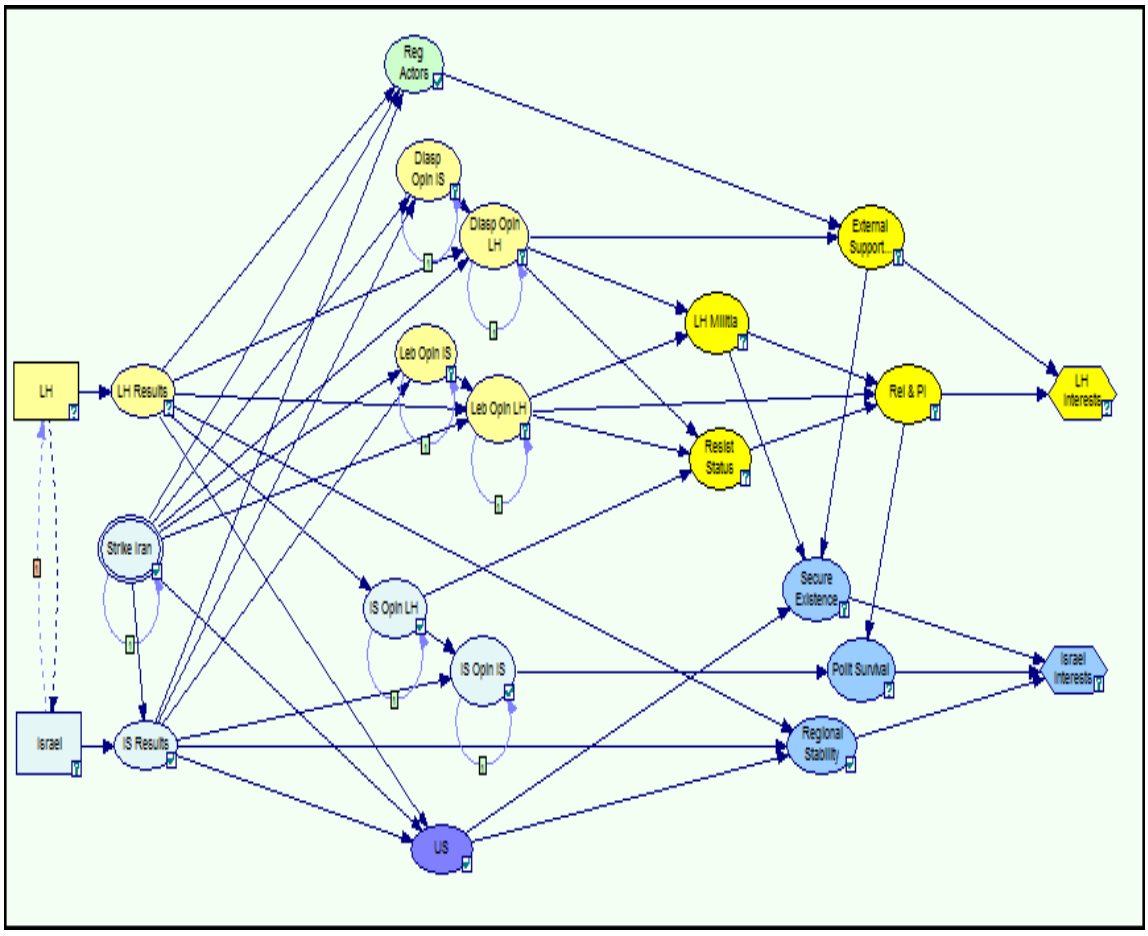

Figure 17. Diagram of Israeli strike on Iranian nuclear facilities.

b. Results

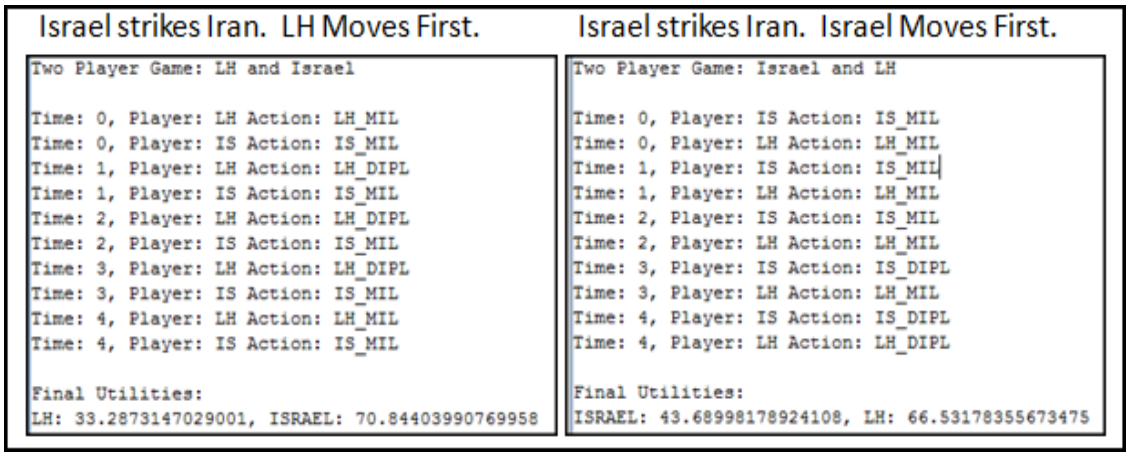
Israel strikes Iran. LH Moves First.
Two Player Game: LH and Israel
Time: 0, Player: LH Action: LH_MIL
Time: 0, Player: IS Action: IS_MIL
Time: 1, Player: LH Action: LH_DIPL
Time: 1, Player: IS Action: IS_MIL
Time: 2, Player: LH Action: LH_DIPL
Time: 2, Player: IS Action: IS_MIL
Time: 3, Player: LH Action: LH_DIPL
Time: 3, Player: IS Action: IS_MIL
Time: 4, Player: LH Action: LH_MIL
Time: 4, Player: IS Action: IS_MIL
Final Utilities:
LH: 33.2873147029001, ISRAEL: 70.84403990769958
Israel strikes Iran. Israel Moves First.
Two Player Game: Israel and LH
Time: 0, Player: IS Action: IS_MIL
Time: 0, Player: LH Action: LH_MIL
Time: 1, Player: IS Action: IS_MIL
Time: 1, Player: LH Action: LH_MIL
Time: 2, Player: IS Action: IS_MIL
Time: 2, Player: LH Action: LH_MIL
Time: 3, Player: IS Action: IS_DIPL
Time: 3, Player: LH Action: LH_MIL
Time: 4, Player: IS Action: IS_DIPL
Time: 4, Player: LH Action: LH_DIPL
Final Utilities:
ISRAEL: 43.68998178924108, LH: 66.53178355673475

Figure 18. Output for Israel Strikes Iran nuclear facilities.

The scenarios represented by the above figures show one way in which a shock can be introduced into the system. The shock in this case was an Israeli strike against Iran and was set to occur in the first time period. However, this need not be the case. By changing the temporal order of the shock node, it could be introduced at any point in the scenario. The self-dependency is used to make the event a one-time occurrence. Without this self-dependency, the shock would repeat in every time period and the behavior resulting from the event would occur in perpetuity. This is usually not desired, though in some cases it may be.

As might be expected, LH becomes militant under this scenario from the very beginning (when the shock is introduced). Interestingly, if Israel conducts the first move, LH tends to maintain its aggression for a longer period of time. In either case, Israel remains very aggressive throughout.

c. Sensitivity Analysis

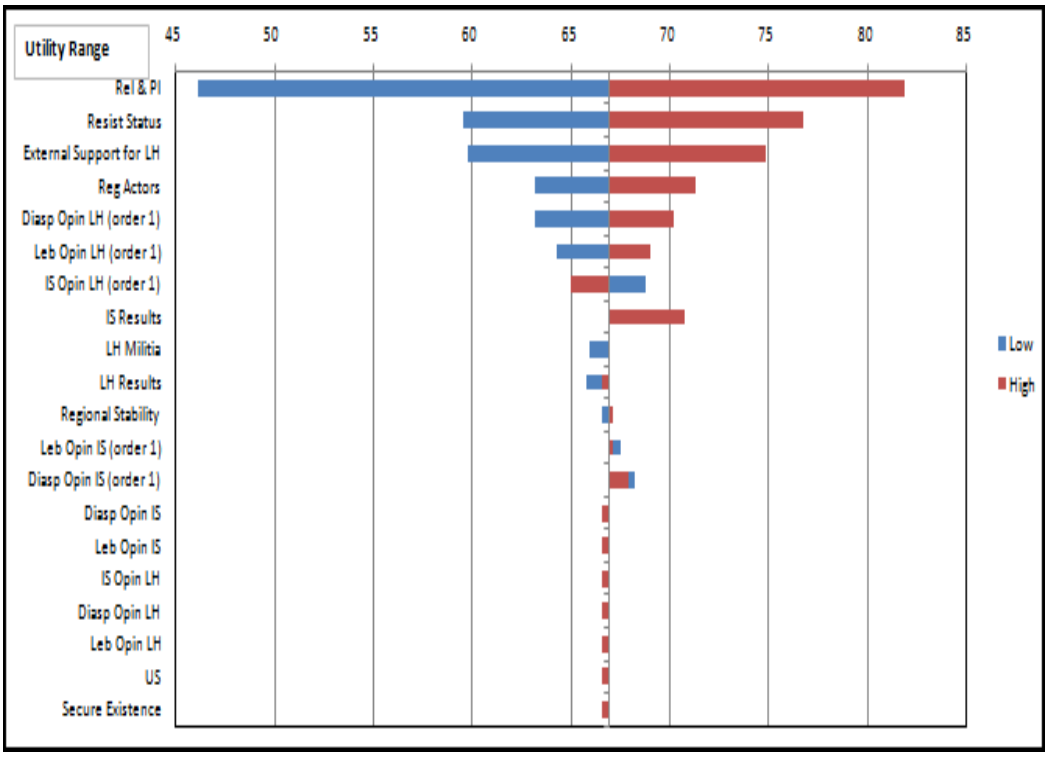

Figure 19. Tornado Diagram for Israeli strike against Iran.

Overall, the key drivers of the model remain the same. There are some lower level changes, however. For one, Israel's interest of "Secure Existence" makes the list (meaning it has at least some effect on the outcome of LH's value). This was not true in the last case. Additionally, Israel's interest of "Regional Stability" has moved up the list relative to several other variables. "IS Results" has also overtaken "LH Results." One interpretation of these facts may lie in the fact that LH's decisions have become almost pre-determined by the way the model was formulated. That is, LH is so incentivized to attack that it does not change its decision easily, so the model is relatively less sensitive to these variables. On the other hand, Israel's decision making may not be as clear cut. Israel's probability of success of an attack, for instance, could drive its decisions more greatly than it did before, at least relative to the variables that drive LH's decisions.

C. SUMMARY OF RESULTS

1. Insights From the Model

It is apparent from this analysis that a deep understanding of stakeholder interests is necessary to model the system correctly. In the case of LH, 'Relevance and Influence' dominates all other factors, at least as the author has ascribed this problem. In the case of Israel, a secure existence is the dominant driver (this analysis was not shown). The interests and their relative influence was derived mostly from discussions with Unified Combatant Command personnel, however, at the time those discussions occurred, the need for a better understanding of the interrelationships between the interests of LH and Israel was not as clear. One of the weaker parts of the model as it is presented is an admitted lack of clarity on these interdependencies. Consequently, the author developed these relationships based on open-source research, but believes it falls short in many ways. Future research efforts should be focused on this area and any users of this model should keep this in mind.

With that said, some general insights can be drawn from this model:

- Political power and influence for both LH and Israeli leadership seems to be largely derived from defining the other as the aggressor. In every case run (those presented and those not), it seems that each has an interest in leading its own public toward a hostile view of its adversary. This means that each may need the other as a "bogeyman" to maintain the political status quo. This fact is very intriguing—though not completely surprising—and future iterations of the model could attempt to explore how this cycle can be broken.

- The Diaspora does seem to matter if one assumes, as was the case here, that LH has a legitimate interest in maintaining its support. The Diaspora and Lebanese popular opinion seem to have nearly identical effects on the system, though it is possible that the magnitude of the Diaspora's influence is overstated in this analysis. This analysis assumes independence between the Lebanese population and the Diaspora, but this is not likely to be the case. This means the Diaspora is at least as potent as the Lebanese people, which may or may not be the case.

- Without the involvement of Iran (and perhaps Syria) and the U.S., it is possible that LH and Israel would have some room to cooperate. Both Israel and LH receive significant support from these actors and have interests in maintaining good relations with them. This support provides the means for each to maintain power and influence (in the case of Israel, the means for the incumbent party to maintain power). As such, in some sense, they seem incentivized to ensure they have an adversary to justify the "need" to maintain these supply lines (these resources are likely used for more than defending against their enemies). In defining this model, it became apparent that without these resource incentives, the cost of provocation seems roughly balanced with the costs of maintaining peace and stability for each of these stakeholders. The main counterpoint is this: Israel may fear too much influence by LH in Lebanon and, on the other hand, LH may need a hostile Israel for its relevance.

2. Discussion of the Model

a. Model Capabilities

This model was developed in an effort to solve decision systems involving two or more stakeholders. As mentioned in Chapter III, STANA is a application that leverages the efficient combinatorics algorithms of Genie v2.0, the flexibility of Java, and uses Excel to manage inputs and outputs. A user's guide for running the model is provided in Appendix C. Current capabilities of this model are:

- Solves 1-player games with an arbitrary number of choices within a single decision node. Model tested up to 15 time steps.

- In 1-player mode, can use Additive Linear Utility (ALU) to account for short-term goals of the decision maker.

- Solve 2-player games where there are exactly two decision nodes with two choices in each node. Model tested up to 12 time steps.

- For both 1 and 2-player games, provides automated, single-variable sensitivity analysis for any number of chance variables.

- For both 1 and 2-player games, terminal conditions can be set to stop the model upon reaching the terminal decision. However, the model currently does not allow specification of a terminal condition specific to a certain player.

- Use of the Genie interface to construct the models allows the user an easy-to-use and intuitive mechanism for constructing a wide range of decision scenarios. The Java implementation is scalable, with exception to the limitations mentioned herein.

- Allows for inputting model arguments from the command line or from an Excel spreadsheet.

b. Model Limitations

This model has significant limitations. The known limitations of this model are:

- Handles only two decision nodes with only two choices each.

- There is no ALU capability installed for the 2-player version.

- Current implementation does not allow for the realization of chance variables feeding into decision variables. This precludes use of common—and very important—decision analysis techniques such as Bayesian updating and use of forecasts (i.e., party problem).

- The underlying transition matrix is stationary. This means that the system does not evolve or adapt over time. This precludes exploring the effects of time decay, such as decreasing relevance over time. It may be possible to develop functions that update the relationships between variables and the probability distributions of the variables. This was not attempted in this research effort.

- In the 2-player version, both players operate from the same reading of the chance model. In reality, different actors interpret situations differently. The concept of situational awareness is not considered.

V. CONCLUSION

A. RESEARCH SUMMARY

This thesis set out to develop a decision support methodology to analyze decision-making logic of stakeholders in a well-defined political system. The study, at the request of Unified Combatant Command, used Lebanese Hezbollah as the case study for analysis. The goal, however, from the outset was the development of the methodology and decision support tool that could be generalized to aid decision analysis of any similar system of stakeholders. The methodology and decision support tool presented in this thesis represents the first step toward achieving that goal.

The first step in any such analysis is to define the system by conducting the necessary historical review to understand the components of the system. With the research questions driving this effort, this thesis conducts a thorough review of the region's history to develop a robust understanding of who should be considered the key stakeholders—those whose decisions must be fully accounted for. Next, it was necessary to understand each stakeholder's point of view and situation context in order to inform the development of what each stakeholder wants and what instruments it has available to achieve those interests. These form the "Interests" and "Actions" components of the system. Finally, as with any important decision-making system, there is uncertainty that must be accounted for. The historical review provides the necessary information to inform the analyst how to plausibly construct the necessary probability models.

Once the over-arching system is understood—having well-defined stakeholders, their interests, their actions, and the structure of chance—the model framework is developed around the research questions. In this thesis, the model framework was developed by constructing an influence diagram representation of the system to provide a transparent mechanism by which to specify relationships between stakeholders, their interests, and the model's inherent uncertainty components. The first step here is to

conceptualize the model in its fullest form, seeking the highest degree of resolution while ensuring the model can be represented transparently and understood by those who would use it.

Having conceptualized and represented the model, this thesis then attempts to implement the conceptual model as accurately as possible. In this case, notional data is used based on the author's interpretation of facts. However, the significant results will come when valid data from subject matter experts informs the model. To ensure this is possible, the model is designed to provide an easy-to-use interface, allowing analysts to manipulate the data—and even the structure of the model—to run any number of scenarios with data as they see fit. The point here is that this research does not seek a specific prescription of what LH would do under given circumstances, but provides the means by which informed analysts can investigate these relationships.

Finally, this thesis presents three scenarios using one of the two models developed. The purpose of analysis here is to demonstrate use of the methodology and decision support tool. Again, the focus is not on the interpretation of results to prescribe LH's decision logic, but to demonstrate, using notional data, some ways in which the models and methodology can be used. Additionally, this thesis demonstrates the model's capability to quickly and easily conduct sensitivity analysis on all model variables. It was felt this capability would be critical due to the large number of probability estimates that inform the model and the inherent uncertainty surrounding those estimates.

B. SUMMARY OF INSIGHTS

The research conducted in this thesis revealed a number of interesting insights that are worth noting. They have been categorized and are presented below. It should be noted that any inferences regarding the stakeholders of this analysis are the opinions of the author alone and are based on a combination of the historical review, specification of the models, and results from numerous iterations of each of the models.

1. LH Decision Making

- LH seems to have an incentive to attain its objectives politically, but LH's political base seems to be defined in terms of its opposition to Israel. As such, it is likely that LH will continue to antagonize Israel enough to ensure its base stays unified.

- Regarding Lebanese opinion outside of its base, it seems that LH should desire tacit support or at least general indifference. Should a significant portion of Lebanese reject LH outright, LH's survival may become tenuous. Therefore, LH seems bound to behave in a manner short of provoking a full Israeli response.

- If the observations above are valid, the following consequences may be in order:

  - Demonstrated constraint by Israel could, over the longer term, allow for the development of some distance between LH's base and the Lebanese population at large. Or, at a minimum, it could prevent LH from expanding support beyond its Shi'a, pro-Syrian base.

  - LH's militia may be the organization's center of gravity by providing it the instrument of power necessary to impose its will, even if the general Lebanese population were to consider rejecting LH.

- LH derives financial support and support in the court of international opinion via the Lebanese Diaspora. However, it seems quite possible that there exist significant correlations between Diaspora support and Lebanese Popular Opinion. That is, there is a component of Diaspora support that may be allocated by the Lebanese Population and there may be a component that is allocated independently of the Lebanese population. It is unknown to the author the extent or magnitude of each of these components. This thesis assumes they are independent and of roughly the same order of magnitude, but the author suspects this may not be the case. A better understanding of Diaspora's role in allocating power and resources to Lebanese political factions would enhance analysis derived from these models.

- The U.S. and Iran seem to serve similar roles in this system. That is, the U.S. and Iran are involved in a global confrontation and both LH and Israel are actors in this game. Whether or not LH and Israel serve as proxy mechanisms for these powers in not clear to the author. However, in the context of this larger conflict, LH and Israel each seem to have incentives to maintain hostile dispositions, while, at the same time, the U.S. and Iran seem to constrain Israel and LH from engaging in full-scale war. An interesting application of this model might be to run a U.S.-Iran scenario to develop a better understanding of the roles these actors should play in the LH-IS game.

2. Modeling and Implementation

- Begin with the research question to be answered, as this will determine the scope and nature of the system to be modeled.

- The most critical element in understanding a system of stakeholders is to define and understand what it is that each actor wants (i.e., their interests). Stakeholder interests drive the decision-making logic and can be complex, interdependent models in their own right. The process of modeling helps reveal the structure of these relationships.

- The model is extremely sensitive to stakeholder interests. The focus of research and understanding should initially focus on ensuring valid estimates of these parameters.

- The model is also very sensitive to changes in variables of higher temporal order. In effect, when a variable of high temporal order is adjusted, all of its predecessors (direct and indirect) are changed. This is because the value of a chance node depends probabilistically on the distributions of all of its predecessors. Thus, a chance variable adjusted in the final time period has a huge impact on the final outcome when compared the same adjustment to the same variable in a previous time period.

- When modeling chance variables, it is advisable that a single variable depends directly on three or fewer variables. If a variable has more than three

predecessors, the process of estimating probabilities becomes nearly impossible. However, any chance node can be broken down into components to make the conditional probabilities easier to estimate.

C. FUTURE WORK

There is significant potential for further development of the work performed for this thesis. In fact, STANA—the application developed for this thesis—does not fully implement the conceptual model presented in Chapter III. The most obvious improvement to this research effort would be to close the gap between the conceptual model and the model implementation. Shortfalls of this thesis effort notwithstanding, recommendations for expanding this research are categorized and detailed below.

1. Modeling

- Popular Opinion Nodes. Develop more detailed probability models to enable better understanding of the dynamics of these nodes. For instance, this author has made some implicit assumptions about Lebanese popular opinion. Namely, that a simple partition exists between LH's "base" and all other Lebanese. However, there are a variety of factions within the population that determine the allocation of political power. These probability models could be developed independently and used to inform the probability tables, or the sub-modeling capability of Genie could be used to specify more accurate relationships.

- External Actors (U.S., IR, SY). The author admits a rudimentary employment of these actors. It would be beneficial in future work to develop basic decision models (such as those used for LH and IS in this thesis) for combinations of external actors to enhance understanding of their decision-making calculus. This would improve estimates for the probability distributions of external actors.

- Representation of Interests. The non-linearity of stakeholder preferences is a complicating factor. The solution in this thesis was to model this as combinations of chance variables, each with its own distribution. These variables are an artifact of this

approach and add complexity to the model where it is not desirable. Future work could focus on providing a cleaner way to represent a non-linear objective function.

2. Implementation

- Number of players/decision nodes. Currently, the multi-player component of STANA handles only two decision nodes with two choices each. Expanding the number of decision nodes, the number of players, or the number of choices within a decision node would greatly enhance STANA's capabilities. Additionally, adding additional players would reduce the need to estimate the probability distributions of external actors, improving the quality of the model.

- Behavior over time. Behavior over time in this implementation is handled using temporal arcs native to Genie v2.0. However, the transition matrix is essentially stationary and only changes over time if the user manually specifies temporal relationships AND the associated conditional probability tables. It seems possible that certain behavioral "functions" could be implemented that might allow for transition probabilities to be a function of time (if say, it was desired that Lebanon support for LH would degrade over time under certain conditions). Genie does not directly allow for this kind of behavior. However, it may be possible to extract information from Genie, build the transition matrix, manipulate it, and then re-populate Genie's probability tables using function-generated information. This could lead to a non-stationary transition matrix that "evolves" over time.

- Prior information and Bayesian updating. The current implementation does not allow for the decision maker to have information available prior to making a decision (i.e., arcs into decision nodes). This would require the model to solve for all possible combinations of realized chance outcomes prior to that decision node. In a single time step with few chance nodes, this would be easy to handle. However, given the desire to observe decisions over time, this is a formidable problem since the combinations grow exponentially in time. By developing the capability to observe

realizations of chance prior to decisions, this model could employ common forecasting structures such as those used in the well-known ‘Party Problem’.

- Learning Effects. If this implementation were enhanced to allow for non-stationary transition probabilities and if the capability to observe prior information was possible, it may be possible allow the stakeholders to learn as the system evolves.

- Perception. The current implementation is set up so that each player works off of the same reading of the chance models. However, it is possible, through Java API (jSmile), to replicate the chance structure using different probability definitions. Implemented correctly, this could be used to model different perspectives or perceptions for each player.

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APPENDIX A. STAKEHOLDER ACTIONS

Stakeholder actions are the combination of the expressed belief of Unified Combatant Command subject matter experts and the interpretation by this author of the historical literature reviewed. Section 1 describes the categorical break-down of actions. Section 2 describes the decisions within each category. It should be noted that the list of actions presented in this appendix differs from those implemented. This is due to limitations in the model's implementation.

A. ACTION CATEGORIES

- Diplomatic/Economic/Financial. Actions in this category include those that use political and diplomatic means to achieve stakeholder interests.

- Information/Intelligence. Actions in this category refer to the use of information propaganda and intelligence services aimed toward either internal or external groups, agencies, or actors.

- Military/Law Enforcement. The military component of this category is straightforward. It is meant to capture actions where an actor uses military means against an external agency, group, or actor. In cases where a stakeholder has a propensity to engage in acts of terror, such actions will be included in this category. Law enforcement decisions, on the other hand, regard actions where force is used to police internal resistance.

B. STAKEHOLDER ACTIONS

1. Lebanese Hezbollah

- Diplomatic**.** Diplomatic choices include:

    - Cooperative**.** Cooperative diplomacy could be viewed as using political coordination in a manner not contradictory to Israel's interests.

- Non-Cooperative. Using political coordination in a manner that is intentionally contradictory to Israel's interests.
- Neutral. Neither cooperative or non-cooperative.

- Military/Law Enforcement. Military choices include:
  - Provoke or Attack Israel. LH could choose to attack Israel directly either using rocket attacks or border violence or incursions. Provoke Israel refers to any action that might use violence or force to attempt to induce Israel into instigating or escalating conflict. This action is specifically meant to imply use of LH's more conventional means of military force.
  - Violence/Terror. LH could attempt one or more attacks involving bombings, assassinations, skyjacking, hostage-taking, maiming, or kidnapping of any target deemed important to Israel or that might send a hostile message to Israel or its people. This action is specifically meant to imply use of sub-conventional means of force. This action also includes any effort to facilitate violence or terrorism through other groups such as Hamas or any other anti-Israel terror group. As such, this action does not imply direct application of conventional force by LH.
  - No Military Action.

2. Israel

- Diplomatic. The same set of diplomatic actions as LH.
- Military/Law Enforcement. Military choices include:

- Offensive Military. Any use of military force when Israel has not been provoked. This could include limited or full-scale military action.
- Defensive Military. Use of military force after having been provoked by another actors. This could also include limited or full-scale military action.
- No Military Action.

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APPENDIX B. STANA (JAVA APP) USER'S GUIDE

This appendix details specific technical guidance for user's of the Java application that executes the models presented in this thesis. Java is used to provide an interface between Genie (using jSmile) and Microsoft Excel (using jExcel). Excel is used to read-in and read-out the data. Genie is used to specify the model, and Java is used to give Genie the ability to solve temporal, multi-player influence diagrams.

It is highly recommended that the Eclipse platform be used to execute the application. This guide assumes the user is operating with Eclipse. A zip file accompanies this thesis in the NPS archives. The file is named STANA.zip (Stakeholder ANalysis Application). This zip file includes all .java and .class files, compressed jExcel v. 2.6.12, and compressed jSmile.

A. SETUP

- Download Genie v2.0 from http://genie.sis.pitt.edu/downloads. The user will need to register, but the software is free.
- Extract all files from STANA.zip.
- Open Eclipse. Create a new package.
- In windows explorer, locate the Eclipse file path associated with the package that was just created.
    - Copy and paste all .java files from the extracted STANA.zip to the workspace\src folder.
    - Copy and paste all .class files from the extracted STANA.zip to the workspace/bin folder.
- Extract the compressed jExcel and jSmile files that were contained in STANA.zip.

- Inside Eclipse, locate the package that was created. Right click and select BUILD PATH and then ADD LIBRARIES.
    - Select USER LIBRARIES and click NEXT.
    - Click on the USER LIBRARIES… button.
    - Click on the NEW… button.
    - Give the library a name and select OK.
    - Now select the library that was just created and click the ADD JARS… button.
    - Navigate to the extracted jExcel folder. Within this folder, find jExcel.jar (file type is executable jar file). Open this file from within the current Eclipse window.
    - Several files should appear under your user library name. Select OK.
    - The user should now be viewing the “Add Library” dialogue box. In this dialogue box, check the box corresponding to the jExcel library (or whatever it was named).
    - Repeat this process for to build the jSmile library.
    - Once both libraries have been added, returning to the command window of Eclipse the user should see three libraries under the package folder in the package explorer on the left side of the screen: JRE System Library(JRE 6), jExcel, jSmile.
    - The program itself is now ready to operate.

B. RUNNING A MODEL

- Inside the STANA.zip file, there is a folder titled “Sample Files.”
- Open this folder and copy all files into whatever file directory the user desires. This will be the workspace where the STANA application will look for user input and then write out the data.
- The “Sample Files” folder contains:
    - LHIS_BaseCase.xdsl. This is the base case used in this thesis.
    - LHMug. This is the base case developed for the Mughniyah question.
    - DataInput.xls. This file allows the user to specify the conditions of the model in one place, from which STANA will read the arguments and execute the program.
- Open datainput.xls. Change cell B1 to reflect the file path where the Genie files are located. This cell determines where read-out files will be stored. It does not have to in the same location as read-in files, but it’s a good idea to keep them together.
- To run the LHIS_BaseCase.xdsl file, simply go to the Eclipse command window and press the “Run” button (green arrow).
    - The command window will ask for user input. Select 1 to use the “read-in” option.
    - Press Enter.
    - The next question asks for a file path. Enter a file path in the following format: C:\\users\\owners\\documents\\datainput.xls

(note: the double backslashes are required). Change the path appropriately to the location where datainput.xls resides on your computer.

- Data input is pre-set to execute LHIS_BaseCase.xdsl. This can, of course, be changed as necessary.
- A two player game should execute. It will print to the command line in Eclipse, and will write out three files: solution.xls, sensanalysis.xls, and unrolledLHIS_BaseCase.xdsl.
  - Solution.xls provides the same data that prints to the console.
  - Sensanalysis.xls gives the high and low ranges associated with single-variable sensitivity analysis.
  - UnrolledLHIS_BaseCase.xdsl shows an unrolled version of the diagram. This is primarily for developer diagnostics.

C. CONSTRUCTING OR MODIFYING A MODEL

- Open Genie. Either open one of the sample files to start with (recommended), or build from scratch.
- Ensure "Temporal Plates" are enabled. Select "Network" from the menu bar. In the drop down list, ensure "Temporal Plates" is checked. When temporal plates are enabled, a rectangle will appear with the title "Temporal Plate(# slices)" at the top center. All diagrams must be constructed entirely within these plates. STANA is programmed to read the temporal information and use it in solving the diagram.
- Specify the diagram as necessary to model the desired situation. Ensure that the following rules are observed:

- One or two decision nodes may be present
  - If one decision node, then it is a single player game and must have only one value node.
  - If two decision nodes, then it is a two player game and there must exist exactly two value nodes.
- In the one player game, the user may specify any number of choices within a decision node.
- In a two player game, the user must specify exactly two choices inside each player's decision node.
- In a two-player game, Genie will assume the player order unless it is specified. Player 1 should have a black "normal" arc going from player 1 to player 2. Player 2 should have an "order 1" arc going from player 2 back to player 1. (note: for unexplainable reasons, the temporal arc will be deleted each time the file is re-opened and Genie will complain. So the temporal arc must be added each time the program is opened. This only applies to arcs between decision nodes).

- For each node, double click it and set its definition (using the definition tab):
  - For decision nodes, input the set of feasible actions (recall, not more than two each in a two player game).
  - For chance nodes, the definition is the conditional probability table. This is where the probability estimates go.
  - For value nodes, this is where the preference ordering of chance outcomes goes. This thesis used a scale of 100 for the perfect

scenario and 0 for the least favorable scenario. This was arbitrary. The main thing is the distance between combinations of outcomes.

- Finally, Genie has many capabilities that are not exploited by STANA. Some of these features may work with STANA, but many will not. Any use of STANA outside these guidelines may result in failure of STANA, Genie, or both.

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